

The
Association of Special Libraries and
Information Bureaux

Report of Proceedings

of the

TWELFTH CONFERENCE

held at

St. John's College, Cambridge

SEPTEMBER 20th to 23rd, 1935

THE OBJECTS OF THE ASSOCIATION ARE : To examine, foster, and co-ordinate the activities of special libraries, information bureaux, and similar services ; to act as a clearing-house for these services ; to develop the usefulness and efficiency of special libraries and information bureaux under whatever titles they may function ; and generally to promote, whether by conferences, meetings, or other means, the wider dissemination and the systematic use of published information.

The Association aims at assisting members who desire information of any kind to get into touch with the appropriate library or other body specialising on the subject ; it does not itself attempt to build up any centralised organisation to provide the detailed information direct.

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1935

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LONDON.

The Association of Special Libraries and Information Bureaux

16, RUSSELL SQUARE, LONDON, W.C.1.

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23	J. D. COWLEY, M.A., F.L.A.	London University School of Librarianship.
24	FRANK CREWS, B.A., A.I.S.A.	Institute of Transport.
25	G. R. CRONE, M.A.	Royal Geographical Society.
26	B. C. CURLING.	Institute of Marine Engineers.
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F.E.I.S.
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- *89 COLONEL LUXMOORE NEW- National Central Library.
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- 92 C. S. ORWIN, M.A. Agricultural Economics Research Institute.
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110	A. W. SWAN, B.A.Sc.	United Steel Company, Ltd.
111	MISS L. M. TAYLOR.	J. Walter Thompson, Ltd.
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113	A. C. TOWNSEND, M.A.	British Museum (Natural History).
114	A. VAN DE PUT, F.S.A.	Victoria and Albert Museum.
115	D. H. VARLEY, B.A.	Royal Empire Society.
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129	DR. C. E. HURREN.	University of London Animal Welfare Society.
130	MRS. KEENE.	
131	L. R. MCCOLVIN, F.L.A.	Hampstead Public Libraries.
132	J. H. PAFFORD, M.A., F.L.A.	National Central Library.
133	MISS M. PEARS.	British Commercial Gas Association.
134	B. D. PORRITT, M.Sc., F.I.C.	Research Association of British Rubber Manufacturers.
135	S. C. ROBERTS, M.A.	Cambridge University Press.
136	H. ROTTENBURG, M.A., M.I.E.E.	
137	L. EARNSHAW SMITH.	Deighton, Bell & Co., Ltd.
138	C. A. SPENCER, M.Sc.	Department of Scientific and Industrial Research.
139	E. P. STACPOOLE.	Press Association, Ltd.
140	COUNCILLOR W. H. SWIFT.	Cambridge Public Libraries.
141	P. S. J. WELSFORD, F.I.S.A.	Library Association.

* Unavoidably prevented from attending.

Editorial Note.

THE papers that follow constitute a record of the proceedings of the Twelfth Conference of the Association. Written papers were, as a rule, prepared in advance by the speakers, and these have been reprinted in full. No verbatim reports of the discussions were made, but, with the aid of notes taken by the Stewards of the meetings and provided by the various contributors to the discussions, as full a report has been printed as the limitations of space permit. The editors take this opportunity to acknowledge their indebtedness to all those members of the Conference who have sent in notes of their contributions.

An index of the contents of the Report is printed at the end. Copies of the Reports of the eleven previous Conferences are still available, and the fifth Report contains an index to the first five.

These Reports are indexed in the Industrial Arts Index of The H. W. Wilson Company, of New York.

16, RUSSELL SQUARE,
LONDON, W.C.1.

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Reception and Opening Session.

By kind permission of the Master and Fellows of St. John's College, the first gathering of the delegates took place before dinner in the Fellows' Combination Room. This was preceded by a visit to the College Library, an account of which will be found on p. 115. Delegates were received by the President of the Association, SIR RICHARD GREGORY, and by the Council.

The Aims and Objects of ASLIB: After dinner a short address was given by the Chairman of the Council, PROFESSOR R. S. HUTTON. He pointed out that a great deal of the value of the Annual ASLIB Conferences lay in the opportunities which they afforded for social and professional intercourse between those who provide and those who utilise information and in the contact between representatives of very varying interests. The membership of ASLIB, now numbering over 300, was amazingly diverse, and in that characteristic was to be found much of the unique value of the Conference discussions.

Nevertheless, the Annual Conferences were not the only form of activity sponsored by the Association. The Council and its Committees undertook during the year a great deal of strenuous work on behalf of members, and, apart from routine work, scarcely a year passed without the careful consideration of some new venture or the deliberation of some special problem. Contact was also maintained with other organisations carrying on similar work at home and abroad.

The individual member received potential benefit from all these activities of the Association, but, in addition, should he find occasion to make use of it, the Enquiry Bureau, backed by the ASLIB Directory to Sources of Information, stood ready to afford him private individual service in locating sources of information on any subject outside his personal grasp.

Professor Hutton went on to pay tribute to the services of the ASLIB Staff and to deplore the state of the Association's financial resources which seriously limited the assistance and even the accommodation available. Many useful developments were completely blocked for the same reason. The membership of ASLIB should and could be many times as great if only the value of its library and information services could be made known to those to whom they would be of benefit.

Professor Hutton's introductory speech was followed by the Presidential Address given by SIR RICHARD GREGORY, who took as his subject "Interpretation of Science."* In some respects this topic could be considered as complementary to that chosen by Sir Richard for his previous presidential address in 1934, when he discussed the treatment of Science in the Public Press. This year, however, he was concerned for the neglect by the world of literature of science as a source of inspiration.

A vote of thanks to the President for his address was moved by Mr. F. A. HOARE, who paid tribute to the interest and value of the paper that had just been delivered.

* Printed in full on p. 16.

The Year's Work of ASLIB

The Eleventh Annual Conference was held at Somerville College, Oxford, from September 21st to 24th, 1934, and in spite of unseasonable weather, proved to be truly successful both as regards numbers of those attending and interest in the papers read. As will be seen later in this Report, one group of papers had very practical results and the Book-List thus evolved developed into one of the major activities of the Association during the early part of 1935.

With ASLIB'S limited staff and resources, it is not possible to undertake more than a certain number of ventures at any one time. The Council considered that the scheme for a quarterly list of recommended Scientific and Technical Books held latent possibilities of such value for the future of ASLIB that concentration of effort upon its development should be given first place. It is for this reason that certain sections of ASLIB'S ordinary activities, such as the Index of Unpublished Information, the Enquiry into the Costs of Printing and Publishing Scientific Abstracts, and the project for the Business Man's Directory, are not reported upon this year. None of these have been forgotten, but progress in these directions has been deliberately subordinated to the venture which is reported upon at greater length on p. 13. It is hoped that the Association as a whole will endorse this action by the Council.

THE ASSOCIATION'S COUNCIL AND COMMITTEES.

The first meeting of the new Council, elected at the last Annual General Meeting, was held on November 12th, 1934, when Professor R. S. Hutton was re-elected Chairman and Mr. A. F. Ridley was elected as Vice-Chairman. During the year seven meetings of the Council were held. During January the Council received with great regret the resignation of Mr. J. E. Hodgson, who found that increasingly heavy calls upon his time made it impossible for him to attend the Council Meetings. For this year, however, Mr. Hodgson consented to remain a member of the Conference Committee.

The Council appointed a Committee consisting of Dr. S. C. Bradford, Mr. R. Brightman, Miss B. M. Dent, Mr. J. J. Eaton, Mr. B. M. Headicar, Mr. J. E. Hodgson, Mrs. C. S. Orwin, Mr. J. G. Pearce, and the Honorary Officers to make arrangements for the 1935 Conference. This Committee has held four meetings.

In addition to the Conference Committee, the Council appointed various other sub-committees which are mentioned elsewhere in this report.

FINANCE AND MEMBERSHIP.

The audited Annual Accounts for the year ended June 30th, 1935, have been circulated to all members and will come before the Annual General Meeting for consideration.

The year ended with a balance in hand of £55 compared with £52 last year which shows a small excess of income over expenditure for the second successive year. Financially, therefore, the Association can be said to be holding its own, but only those who work in close contact with it can realise how much its activities and potential value

are hampered by the limitation of staff and the necessity for restrictive economy. The net membership figure shows a slight upward tendency, the number now standing at 303, but the increase is disappointingly slow. The year has been one of consolidation, but the rate of future progress must be determined by the increase in financial resources.

THE BOOK-LIST.

The outstanding feature of ASLIB'S work in the year under review was the inauguration of a scheme for the issue of a quarterly list of recently published Scientific and Technical Books, each recommended by an expert qualified to judge the book in question. The scheme was mainly intended for the guidance of public and general librarians. The need for such a list was clearly stated at the 1934 Conference when, following the four papers on the Selection of Scientific and Technical Books, a resolution was passed asking the ASLIB Council to enquire into possible ways of meeting the demand. The Council appointed the following as a Committee to investigate the matter : Dr. S. C. Bradford, Miss B. M. Dent, Miss Mizpah Gilbert, Professor R. S. Hutton, Dr. E. E. Lowe, Mr. A. F. Ridley, Mr. J. D. Stewart, and Mr. J. E. Walker.

Under the Chairmanship of Dr. E. E. Lowe, a scheme was drawn up, one of the main principles of which consists in securing the voluntary help of those who are intimately concerned with the new literature of the diverse branches of science and technology, and able from their expert knowledge of these subjects to assess the relative merit of such books, particularly in their reliability and suitability for recommendation to general libraries. The co-operation of many members of ASLIB and other leading specialist organisations was invited. The response was most encouraging and the first experimental issue of the list was produced in mimeographed form in March, 1935. This was followed, at the end of June, by a second experimental issue, printed and with several additional sections. It is hoped that the next list will appear in October. Already over sixty contributors are providing the individual sectional recommendations.

The scheme depends entirely upon the goodwill of a large number of specialists and the co-operation of men and women who already have little enough leisure. The sincere thanks of ASLIB are due to those whose co-operation in an untried scheme made the Book-List possible.

By its very nature, the scheme was one that could only be judged by practical experience. To present the list for outside criticism in its immature state might have been to prejudice its future. For this reason the Committee decided that the circulation of the earlier issues should be confined to the ASLIB membership. Much has had to be learnt by experience both in the working of the scheme and in the actual form of its presentation. Many improvements remain to be made, but it is hoped that it may soon become a recognised bibliographical tool of value comparable to the ASLIB Directory and appeal to a wide circle of subscribers.

THE ASLIB ENQUIRY BUREAU.

Looking through the register of enquiries dealt with at the ASLIB office, two points stand out ; first, the diversity of the problems which

range from an enquiry as to the publisher of a certain work to a request for sources of technical information concerning Fischer electrodes; secondly, the comparatively small proportion of the Association's membership from which these enquiries come. We do not urge members to send in enquiries—far from it. The office is already under-staffed and answers which may be sent by return of post often represent some eight or ten telephone enquiries. But if any member is tempted to question the material value of a subscription to ASLIB, at least let him give the Association a trial on one of its practical sides.

THE PANEL OF EXPERT TRANSLATORS.

This continues to work unobtrusively, but is not as much used as it might be. It is hoped that the opportunity for the discussion of this service at the Twelfth Conference may result in some constructive proposals for its improvement.

ASLIB DIRECTORY AND OTHER PUBLICATIONS.

Taking into consideration the date of its publication, the sales of the Directory continue to be very satisfactory. Twenty-one copies were sold during the year, ten by the Oxford University Press and eleven by the Association itself.

When selling the Directory to members it is now customary to include copies of those issues of the Bulletin which contain lists of additions and amendments. At the same time, members are reminded that, should they wish to draw up reference lists based on the Directory, it is as well to notify the Secretary, who will then be able to say whether any important body of supplementary information on that subject is held at the office.

The Conference Reports and the reprints of special papers are already in demand by non-members of the Association and deserve wider recommendation. The income from all these publications forms a valuable addition to our resources.

“ASLIB INFORMATION.”

We would like to take this opportunity of thanking those who have kindly contributed articles to this Bulletin from time to time. The Secretary would also be glad to consider any suggestions for suitable topics to be dealt with in future issues.

ASLIB AND CLASSIFICATION.

The Council appointed Mr. A. F. Ridley to act as the representative of ASLIB on the Joint Committee of ASLIB and the British Society for International Bibliography in succession to the late Sir Frederick Nathan. At a meeting of the Joint Committee held in January, 1935, an Editorial Board was formed of which the chief function will be to collaborate on the work of overseeing the translation of the Universal Decimal Classification into English. The English edition is based on the French and German editions and will incorporate the additional classes and amendments which are included in the latter. It is the intention to issue the English edition in large sections, beginning with the Auxiliary Tables and Class O. Class O is now in the hands of the printer. (*See p. 117.*)

REPORT OF THE LANCASHIRE AND CHESHIRE BRANCH OF ASLIB.

Miss B. M. Dent, Hon. Secretary of the Lancashire and Cheshire Branch of ASLIB, sends the following report :

A joint meeting of the Branch with the North-Western Branch of the Library Association, the North-Western Division of the A.A.L., and the Manchester and District Library Fellowship was held at the new Central Library, Manchester, on Wednesday, November 21st, 1934. Members were kindly invited to afternoon tea by invitation of the Manchester Public Libraries Committee. Later the guests, who numbered over 200, assembled in the attractive Lecture Theatre in the basement, where the Chief Librarian, Mr. Charles Nowell, F.L.A., gave a very interesting account of the building and its departments. At the conclusion of the lecture, the guests were divided into small parties and taken round the Library by members of the staff. The opportunity thus afforded of inspecting at close quarters details of the library equipment and of asking questions about the administration was greatly appreciated by the ASLIB members who were present.

LONDON AND HOME COUNTIES BRANCH OF ASLIB.

A London and Home Counties Branch of ASLIB was successfully inaugurated at a meeting on December 7th, 1934, held at Chatham House by kind permission of the Royal Institute of International Affairs. Mr. H. H. Johnson, M.I.Mech.E., M.I.E.E., of "Engineering" Ltd., was elected Chairman and Miss Evelyn Atkinson, of Messrs. J. Walter Thompson, Ltd., kindly consented to act as Hon. Secretary. After the meeting, members had the pleasure of seeing over Chatham House, including the very interesting library.

On January 24th, a second most enjoyable meeting of the Branch was held by courtesy of the Council of the Royal Institute of British Architects at the Institute's new premises in Portland Place, when Mr. Edward Carter acted as host and guide.

Two parties of ASLIB members from the London area were able to visit the Mount Pleasant Post Office Buildings on April 11th and 16th, and on June 20th another small group visited the Noise Abatement Exhibition held by the Anti-Noise League at the Science Museum. It is hoped that further meetings will be organised in the Winter months and that these opportunities for contact between members engaged in widely differing fields of work will ultimately strengthen the Association as a whole.

At the close of this brief summary of the year's work, the Council wishes to express its great pleasure in securing the consent of Sir Richard Gregory to continue as President of the Association for the forthcoming year. His support and interest at the last Conference by his address and otherwise, and his valuable advice throughout the year have been of the utmost value to the Association, and we greatly appreciate his generous consent to continue to fill the office of President.

R. S. HUTTON, *Chairman.*

E. M. R. DITMAS, *General Secretary.*

Interpretation of Science.

BY SIR RICHARD GREGORY, Bart., F.R.S.

The address given by me last year, on "Science in the Public Press," was largely a plea for increased attention to scientific subjects in newspapers and other periodicals. It was suggested that there is a widespread interest in scientific discoveries and conceptions, and that encouragement should be given to the production and distribution of articles in which such developments are made intelligible and acceptable to general readers. Appreciation of what is important in news of this kind requires a scientific training, while journalistic experience, and a feeling for good literary style, are desirable for popular treatment of the available matter. Considerations such as these are concerned in the preparation of scientific articles which will appeal to thoughtful readers among the general public.

In addition to this "literature of knowledge", there is, following De Quincey's division, the "literature of power", by which he meant poems and other writings which survive because of their beauty of expression, as distinct from information which is continually being revised and expanded. By this standard, however brilliant the exposition of a scientific subject may be, it is not considered to be what is commonly known as literature unless it represents emotional response to what is perceived or experienced. It is true that a passage from one of Sir James Jeans's books appears in the thousand pages of literary extracts included in *The Oxford Book of English Prose*, but this is the only one representing an aspect of modern scientific thought.

In literary circles it seems to be commonly believed that the pursuit of scientific knowledge produces a cold and mechanistic type of mind altogether opposed to the throbbing and compassionate heart of life to which literature aims to respond. Even the knowledge itself is regarded superciliously because it cannot claim to belong to the eternal verities. "The gods are dead," wrote W. E. Henley.

"The world, a world of prose,
Full-crammed with facts, in science swathed and sheeted,
Nods in a stertorous after-dinner doze!
Plangent and sad, in every wind that blows
Who will may hear the sorry words repeated :—
'The Gods are dead'."

It is true that the old idols of wood and stone are gone, but far nobler conceptions have taken their place. The universe no longer consists of a few thousand lamps lit nightly by angel torches, but of many millions of suns moving in the infinite azure, into which the mind of man is continually penetrating further. Astronomy shows that realms of celestial light exist where darkness was supposed to prevail, while scientific imagination enables obscure stars to be found which can never be brought within the sense of human vision, the invisible lattice work of crystals to be discerned, and the movements of con-

stituent particles of atoms to be determined as accurately as those of planets around the sun. The greatest advances of science are made by the disciplined use of imagination; but in this field the picture conceived is always presented to Nature for approval or rejection, and her decision upon it is final. In contemporary art, literature, and drama, creative imagination may be exhausted, but not in science, which can provide hundreds of arresting ideas awaiting beautiful expression by pen and pencil. With one or two brilliant exceptions, popular writers of the present day are indifferent to the knowledge gained by scientific study, and unmoved by the message which science alone is able to give. Unbounded riches have been placed before them, yet they rarely raise their eyes from the primitive refuse heap. Not by their works shall we become "children of light", but by the indomitable spirit of man ever straining upwards to reach the stars.

Science needs not only writers to make its achievements intelligible to general readers, but also poetic and other interpreters who will expound its intent and influence by artistic representation or performance. It is to such literary and similar interpretations of ascertained knowledge that this address is devoted, and not to purely scientific description, however admirable and accurate this may be. Several years ago the separation of the scientific and the æsthetic sides of culture was commented upon in the Report of a Committee of the then Prime Minister on The Teaching of English in England, and the hope was expressed that the two might be more closely united.

"We have a traditional culture," the Committee said, "which comes down to us from the time of the Renaissance, and our literature, which is rich, draws its life-blood therefrom. But the enormous changes in the social life and industrial occupations of the vast majority of our people, changes begun in the sixteenth century and greatly accentuated by the so-called Industrial Revolution, have created a gulf between the world of poetry and the world of everyday life from which we receive our 'habitual impressions'. Here, we believe, lies the root cause of the indifference and hostility towards literature which is the disturbing feature of the situation, as we have explored it. Here too lies our hope, since the time cannot be far distant when the poet, who 'follows wheresoever he can find an atmosphere of sensation in which to move his wings', will invade this vast new territory, and so once more bring sanctification and joy into the sphere of common life."

Writing at the beginning of the nineteenth century, Wordsworth similarly looked forward to the time when the poet would find inspiration in aspects of scientific achievement and industrial progress. He suggested that:

The remotest discoveries of the Chemist, the Botanist, or Mineralogist, will be as proper objects of the Poet's art as any upon which it can be employed, if the time should ever come when these things shall be as familiar to us, and the relations under which they are contemplated by the followers of these respective sciences shall be manifestly and palpably material to us as enjoying and suffering beings. If the time should ever come when what is now called science, thus familiarised to men, shall

be ready to put on, as it were, a form of flesh and blood, the Poet will lend his divine spirit to aid the transfiguration, and will welcome the being thus produced, as a dear and genuine inmate of the household of man.

The suggestion in these extracts is that poetry, like other forms of art, should follow on the heels of knowledge. During one period in the history of English poetry there was almost a total absence of intimate knowledge of natural objects and events obtained by personal observation. Nature was interpreted as gardens and green fields, with birds singing and shepherdesses dancing, but the interest was sentimental rather than scientific; that is to say, little evidence was shown of first-hand knowledge of objects and events in the world around us.

Some of the greatest poets have, however, enriched their verse by the study of natural phenomena—Lucretius, Milton, Dante and Goethe, for example, each made accurate use of the scientific knowledge of their times. In English poetry dealing with Nature—the countryside as apart from precise science—Thomson in his “Seasons” brought about a great development of interest in the natural world related to universal human nature. Even closer contact was revealed by Wordsworth, who accepted Divine thought as pervading all Nature and the poet as responding to the moods with which he was in close communion.

Keats and Shelley, Tennyson and Browning all saw beauty and power in Nature, and each has given us works in which great poetic perceptions are mingled with passionate human feeling. Keats by perfect phrase and exalted fancy expressed the poetic love of Nature for her own sake, as in his thoughts on the song of the thrush in *Nature's Child* :

O fret not after knowledge!—I have none,
And yet my song comes native with the warmth.
O fret not after knowledge!—I have none,
And yet the Evening listens.

Shelley, on the other hand, in *Queen Mab*, written when he was only eighteen years of age, showed himself to be acquainted with existing knowledge of the sun and stars, the structure of the universe and other astronomical studies. Similarly, Wordsworth as the contemplative lover of Nature differs from Tennyson who observed her features in minute detail and recorded them with faithful affection. In his felicitous combination of science and poetry Tennyson reveals naturalism at its highest and best. Robert Bridges in *The Testament of Beauty* similarly shows how observations of Nature and science may be presented in classical literary style and illustrate that “This spiritual elation and response to Nature is Man's generic mark.”

Though poetry and science represent different attitudes towards Nature, they are not mutually destructive and may be complementary to one another. The purpose of poetry is not to present facts, but to express stimulating thoughts in a perfect setting of words. While science seeks to secure uniformity in verifiable truths, the essence of poetry is diversity of conception. To the scientific imagination the atom is a microcosm in which the movement of each electron plays a particular part; and it is upon the nature and consequences of the

movements of such particles that attention is concentrated. The desire is to see things as they are, whereas the poet aims to display the emotional feelings aroused by them. Coleridge defined the difference between the two types of mind when he wrote : "The proper and immediate object of science is the acquirement or communication of truth ; the proper and immediate object of poetry is the communication of pleasure."

The two intentions are not, however, necessarily opposed. It is common to-day to disparage Victorian verse, yet no poet has surpassed Tennyson in the application of scientific truth to poetic purpose or in his wealth of allusions arising out of a knowledge of Nature's operations and laws. Interest in scientific studies increased his range of selection and opened his eyes to new phenomena and ideas. His poems abound in descriptive beauty, and though many are so well-known as to have become almost trite, yet it is permissible again to quote a selection from them to show how Nature knowledge may be successfully united to poetry. What a perfect picture of the last stage of metamorphosis of an insect is afforded, for example, by the words from *The Two Voices* :

To-day I saw the dragon-fly
Come from the wells where he did lie.
An inner impulse rent the veil
Of his old husk : from head to tail
Came out clear plates of sapphire mail.
He dried his wings : like gauze they grew ;
Thro' crofts and pastures wet with dew
A living flash of light he flew.

The constellation of Orion, which commands attention in the sky at night during winter months, approaches the setting sun as spring comes on and is eventually lost in the twilight. This is a mere statement of common observation, but in *Maud*, Tennyson paints the scene with the brush of an artist ;

It fell at a time of year
When the face of night is fair on the dewy downs,
And the shining daffodil dies, and the Charioteer
And starry Gemini hang like glorious crowns
Over Orion's grave low down in the West.

There are many poetic descriptions of the midnight sky, the changing moon, morning and evening stars and other obvious aspects of the heavens, but few reveal even an elementary acquaintance with what is known of these celestial bodies. Tennyson was not only an observer, but was also familiar with current astronomical thought about the stellar universe and the formation of the solar system. The evolution of worlds by the contraction of a mass of gas is given poetic expression in several of his works, as, for example, in his notes on *The Palace of Art*, where the lines appear :

Regions of lucid matter, taking form,
Brushes of fire, hazy gleams.
Clusters and beds of worlds, and bee-like swarms
Of suns, and starry streams.

Though the nebular hypothesis, which was evidently in Tennyson's mind when he wrote these lines, has had to be revised in the light of new knowledge, his phrases are still perfect descriptions of what can be seen in the heavens.

Milton shows in many places that he was in contact with some aspects of the new philosophy of his time. Galileo's observations of mountains and plains on the moon, revealed to him through his small telescope when Milton was a child, are referred to by the poet in *Paradise Lost*, where Satan's shield is described as :

The broad circumference
Hung on his shoulders like the moon, whose orb
Through optic-glass the Tuscan artist views
At evening from the top of Fesolè
Or in Valdarno, to descry new lands.
Rivers or mountains in her spotty globe.

Milton knew also of Galileo's discovery of the true nature of the Milky Way when he beautifully described this celestial girdle as :

A broad and ample road, whose dust is gold
And pavement stars, as stars to thee appear,
Seen in the Galaxy, that milky way,
Which nightly as a circling zone thou seest
Powdered with stars.

Ancient philosophers speculated and disputed on the constitution of this belt of milky brightness which stretches across the sky at night, but it was not until the invention of the telescope that its true character became known. "By the irrefragable evidence of our eyes," said Galileo, "we are freed from wordy disputes upon this subject, for the Galaxy is nothing else but a mass of innumerable stars planted together in clusters."

It may justly be maintained that scientific truth is not an essential quality of good poetry, which seeks not to unveil mystery but to express it in imagery. There is thus much that appeals to those with poetic instincts in calling the Milky Way the River of Heaven, as do the Chinese and Arabs, or the Path of Souls, as do some North American Indians. Among the ancients a variety of similar beliefs prevailed, one being that a star which escaped from its appointed place set light to the whole space it passed over in its circular course, and so formed the Milky Way. These conceptions were not, however, put forward as imaginative poetry, but as philosophical explanations of what was observed. The Greek philosophers were the men of science of their day, and their ideas were often expressed in verse. Had the Greeks known that the Galaxy consists of innumerable faint stars, they would have been saved from such primitive speculations and one of their poets or philosophers might have forestalled Milton in his beautiful description of it.

It is now known that the Milky Way traces out the general shape of our star system and represents a mass of about a hundred thousand million suns. The sun, with the earth and the other planets, is at a little distance from the centre of this congeries of stars, which has the shape of a flattened disc or wheel. We are looking towards the edge of the disc when we see the Milky Way, so that there is an apparent

concentration of stars in the direction of the greatest extension of our stellar system. There is substantial evidence that hundreds of thousands of similar systems exist far beyond the limits of the Milky Way, so that our celestial archipelago is only one of an immense number distributed through space. The majesty of the heavens inspired the poetic genius of Job, expressed in such words as "Is not God in the height of Heaven? and behold the height of the stars, how high they are." The mind of man now comprehends a far greater universe of stars, but there has been little emotional interpretation of this wonder in poetic or other literature.

A perfect example of poetic expression applied to a common natural phenomenon is afforded by a sonnet on a shooting star which appeared some years ago in an American magazine, and impressed itself upon my memory, though the title of the magazine and name of the author have been forgotten. The appearance of a shooting star is due to a small portion of cosmic matter, often no larger than a pea, being drawn into the earth's atmosphere and being consumed through the intense heat produced by its rapid movement. In the following verse the poet, while accurately describing what occurs, brings human feeling into the expression of it, and it is his thought rather than the explanation which makes his verse beautiful.

Far better 'tis, to die
the death that flashes gladness,
than alone, in frigid dignity,
to live on high.
Better, in burning sacrifice,
be thrown against the world
to perish, than the sky
to circle endlessly,
a barren stone.

Another fine example of the transformation of a scientific fact into poetic beauty is afforded by Francis Thompson's lines :

All things by immortal power
Near or far,
Hiddenly
To each other linkèd are,
That thou canst not stir a flower
Without troubling of a star.

It required a poet thus to apply the universal law of gravitation to human influences, and to touch the heart while giving a thought upon which even a mathematician may well ponder.

Poetry is not, indeed, the expression of logical thought or scientific principle, but rather the revelation of human feeling and the art of combining words in metre and phrase which impress the mind in much the same way as music. Campbell did not want "proud philosophy" to teach him the beauty of the rainbow and Keats set forth the same doctrine that "all charms fly at the mere touch of cold philosophy", yet a poet familiar with the optics of rainbow formation might well find in them a source of inspiration. Just as emotion does not manifest itself in exactly the same way in any two minds, so everyone sees a different rainbow and is the sole centre of the "triumphal arch" which he sees. The particular display of colours

admired by him is for him alone, and millions of raindrops falling through the air contribute to his pleasure by their refractive effect upon sunlight. To attempt to explain the formation of a rainbow in verse would not be poetry, but a literary outrage, yet the natural events which lead to a consciousness of the wonder furnish a worthy theme for a muse with poetic insight.

If the attitude presented by Keats and Campbell were true, its consequence would be to deprive every student of elementary optics of the possibility of enjoying the sight of a rainbow. It would be just as illogical to suppose that appreciation of music must be denied to all who have a knowledge of acoustics, or that when a chemist knows the constitution of a synthetic perfume he loses his sense of smell. Knowledge does not necessarily prevent poetic conceptions or strangle imaginative thought. All that it does is to place mystery on a different and a higher plane, and for a single wonder it substitutes a thousand for interpretation by poetic imagery.

It can scarcely be said that Wordsworth's vision has come true and that literary genius has found inspiring themes in the great achievements of modern science. John Davidson, however, in his *Testament* made some remarkable references to the structure of matter, and the transition of substance to a condition of self-consciousness. But while so few of our masters of literature are responsive to results of scientific study, a rich field from which precious gems of thought could be derived is neglected. Among men of letters who have brought the human spirit into scientific themes in works of prose are Thomas Hardy, H. G. Wells, Sinclair Lewis and Aldous Huxley. Also, in the works of George Meredith, John Masefield, Laurence Housman, and some other leaders, the fringe of such knowledge is occasionally the source of poetic expression. Fuller response to the growth of observational knowledge is found in Alfred Noyes, who, in the three volumes of *The Torch Bearers*, has given us a stimulating epic of scientific discovery relating to the heavens, the earth, and man's control of natural forces. There is no lack in this work of appreciation of the devotion of scientific pioneers to the cause of truth and their influence for good throughout the ages.

With such faithful and unrewarded investigators in mind, we recollect that Coleridge devoted one of his sonnets to Joseph Priestley, the discoverer of oxygen and pioneer in the experimental study of gases. Priestley's advanced views on theological and political subjects were so unpopular that in 1791 a mob fired his Unitarian chapel and sacked his house, causing him to seek safety in London. Three years later he emigrated to America, where he lived for ten years until his death. When Priestley left England, Coleridge was a young man of twenty-two and the sonnet was probably written at that time. It contains the lines:

Though roused by that dark Visir riot rude
Have driven our Priestley o'er the ocean swell ;
Though Superstition and her wolfish brood
Bay his mild radiance, impotent and fell ;
Calm in his halls of Brightness he shall dwell ;

And from her dark retreat by wisdom won,
Meek Nature slowly lifts her matron veil
To smile with fondness on her gazing son !

It is not surprising that Priestley's departure from his native land should have aroused the sympathy of such a strong democrat as Coleridge. The cause of intellectual freedom has not, however, found a similar apostle among poets to-day when Einstein and hundreds of leaders in science, art, and literature have been driven from the country of their adoption, in suffering and in shame, to find homes in other lands. If oppression and injustice can still stir the strings of the human heart, surely here is a theme for a poem which will live when the exiles who are now sorrowing by the waters of Babylon will have passed away.

This reference to Coleridge's tribute to Priestley, and the possible awakening of similar emotional response to-day, is, however, only incidental to the purpose of this address. There is no lack now of accurate description and graceful phrasing in poetic and other literature dealing with what may be called natural history subjects. It cannot be said, however, that the intellectual horizon of men of letters generally has been extended by advances in modern science. There is not much evidence in the works of leaders in literature of assimilation of the new knowledge, or even of the slightest sympathy with it. Occasionally, one finds a reasonable attitude towards the age of science and invention in which we live, but more usually there is an absence of an outlook which will regard science not merely as a storehouse of facts to be used for material purposes, but as one of the great human endowments to be ranked with art and religion, and the guide and expression of man's fearless quest for truth. "If we live in an age of mechanism," said "The Roadmender" of Michael Fairless, "let us see to it that we are a race of intelligent mechanics; and if man is to be the Demon of a machine let him know the setting of the knives, the rise of the piston, the part that each wheel and rod plays in the economy of the whole, the part that he himself plays, co-operating with it."

The machine has always been regarded as a soul destroying agency, and one of the reactions is to escape from it and return to primitive conditions of life. This cult of romanticism has been the theme of many idylls in which the beauties of Nature and the simple pleasures of country life are presented as ideal conditions of human existence. The machine itself is condemned instead of the selfish and unsocial uses made of its power. The greatness of scientific discovery and mechanical ingenuity is naturally overlooked because of sympathy for the working classes who have been exploited to secure industrial success and profits. The story of the development of the machine and its influence upon the cultural forms of western civilisation is brilliantly told by Mr. Lewis Mumford in his work entitled *Technics and Civilisation*, published last year. Here we have not merely an account of mechanical contrivances and the part they played in the industrial revolution, but a history of the machine and its social and æsthetic influences over a period of a thousand years. The distinguishing characteristics of the volume is the attention given to mechanism as an element of human culture, how the perception of its meaning may be interpreted in painting and sculpture, so that art, and literature also, may be freed from the romantic prejudice against the machine as necessarily hostile to the world of feeling. Science, and its effect upon invention and mechanisation, have created a new environment which can be shaped to satisfy man's intellectual as well as his material needs.

"The sensitive apprehension of this new environment," says Mr. Mumford, "its translation into terms which involve human affections and feelings, and that bring into play once more the full personality, became part of the mission of the artist; and the great spirits of the nineteenth century, who first fully greeted this altered environment, were not indifferent to it. Turner and Tennyson, Emily Dickinson and Thoreau, Whitman and Emerson, all saluted with admiration the locomotive, that symbol of the new order in Western Society. They were conscious of the fact that new instruments were changing the dimensions and to some extent, therefore, the very qualities of experience; these facts were just as clear to Thoreau as to Samuel Smiles; to Kipling as to H. G. Wells. The telegraph wire, the locomotive, the ocean steamship, the very shafts and pistons and switches that conveyed and canalised or controlled the new power, could awaken emotion as well as the harp and the war-horse; the hand at the throttle or the switch was no less regal than the hand that had once held a scepter."

How a machine in action can give the impression of rhythm, precision, efficiency, and duty, working in harmonious unity, is strikingly illustrated in Mr. Rudyard Kipling's poem *M'Andrew's Hymn*, in the course of which the chief engineer of a steamship replies to a passenger who has suggested that steam has spoilt the romance of the sea.

Romance! Those first class passengers they like it very well,
Printed and bound in little books; but why don't poets tell?
I'm sick of all their quirks and turns—the loves and doves they
dream—

Lord, send a man like Robbie Burns to sing the Song of Steam!
To match wi' Scotia's noblest speech yon orchestra sublime
Whaurto—uplifted like the Just—the tail-rods mark the time.
The crank-throws gin the double bass, the feed pump sobs and
heaves

An' now the main eccentrics start their quarrel on the sheaves! :
Her time, her own appointed time, the rocking link-head bides,
Till—hear the note?—the rod's return whings glimmerin'
through the guides.

They're all awa'! True beat, full power, the clangin' chorus goes
Clear to the tunnel where they sit, my purrin' dynamoes.
Interdependence absolute, foreseen, ordained, decreed,
To work, ye'll note, at any tilt an' every rate of speed.
Fra skylight-lift to furnace bars, backed, bolted, braced an'
stayed.

An' singing like the Morning Stars for joy that they are made;
While, out o' touch o' vanity, the sweating thrust-block says:
"Not unto us the praise, or man—not unto us the praise!"
Now, a'together, hear them lift their lesson—theirs an' mine:
"Law, Order, Duty and Restraint, Obedience, Discipline."—

That is the best illustration of what I understand by interpretation of mechanised science; and neither it nor any like it is usually to be found in anthologies of verse or prose. Among men of science themselves there are several who have passed from the laboratory into the garden of poetry and have successfully cultivated beautiful flowers in

it, while others have shown themselves masters of English prose. Most scientific workers know well enough how science touches art and music, how it may enter into literature and how it makes history, but there is not like appreciation of its meaning from representatives of beauty and truth in other fields. It is to promote a closer relationship that this address has been written, so that knowledge and the artist's response to it may be complementary to each other. William Watson expressed their spiritual unity in his verse

Science and Art, compeers in glory,
Boast each a haunt divine.
"My place is in God's laboratory"
"And in his garden, mine."

To the worker in the laboratory or observatory, however, it would be encouraging if the poet would occasionally stray into his domain and show interest in what is being done to understand structures and processes in Nature. A few years ago, Mr. Kenneth Knight Hallows undertook a detailed literary research with the view of finding what had been done to develop poetry of science since Wordsworth's forecast of its future, and he described his result in an essay published in a small book entitled *The Poetry of Geology*, as well as in his complete *Poetical Works*. A strong appeal is made in this essay for the creation of a new school of poets of science, who will employ their genius to interpret scientific truths with accuracy and charm.

Any such poetry must embody new conceptions and creative thought vibrant with human feeling and not be mere photographic images or phonographic records of phases of scientific knowledge. While it is to be regretted that achievements of modern science have failed to inspire contemporary poets, we realise fully that the human heart will not be touched by soulless descriptions of natural events or phenomena. "Poetry," said Leigh Hunt, "is the utterance of a passion for truth, beauty and power, embodying and illustrating its conceptions by imagination and fancy." There can be no inspiring poetry of science without the possession of these spiritual attributes and the artistic instinct which will clothe them in garments of blissful words and radiant phrases. When the poet of science does arise, he will probably not have had a specialised scientific training, but his mind will be sensitive to the wonder of scientific discoveries and the insight they afford into natural things from the atom to the celestial universe. Through appreciation of these revelations he will be uplifted to planes of creative thought and sublime interpretation.

Training for Special Library Work.

By J. D. COWLEY, M.A., F.L.A.

The problem of the training of men and women for work in special libraries and information bureaux is one created in the first place by the variety of methods employed in these institutions, due no doubt to the haphazard though not necessarily inefficient way in which such machinery has been put together. Every society or industrial concern which has formed a library or information bureau has done so with a particular end in view, viz. the provision of material for research or information for its own members or for a limited section of the public interested in a particular subject; naturally the methods adopted for the collection, preservation and distribution of material have been worked out and in many cases are still being worked out with little regard for established practice in librarianship, the only consideration being the discovery of the best means of securing the particular object in view. Such egotism, if I may call it such, on the part of special and institutional librarians generally makes it extremely difficult for a school of librarianship to provide a training that will fit people for employment in any one of the variety of special libraries now existing, and has led, I think, to some disappointment at the results so far achieved by our system.

A secondary difficulty arises from the conflict of opinion as to the main object of librarianship. For a variety of reasons the principle is only slowly losing ground that the librarian's duty is to collect and preserve material and to allow the student reasonable access to it, leaving him to make the best use he can of what is provided. Our more progressive colleagues, including I believe those who have the direction of the modern information bureau, go far beyond this old-fashioned theory. One definition of librarianship, or of a part of it, states it to be "sympathetic and *informed* aid in the interpretation of material for study or research," and this view, with which I am in complete agreement, is fully upheld by Dr. Hedges and Dr. Homer in their paper. We need then, men and women who are not only trained in the technicalities of handling the material of research, but are also sufficiently informed in the subject of that material to interpret it and pass on the information so gained in an acceptable form to others. The question whether training in librarianship ought to precede or to follow training in research has yet to be decided, but I am inclined to think for the present at any rate the only feasible plan is for the librarianship training to come first, so that an assistant in a special library may begin his work with a good grounding in methods of cataloguing, classifying, abstracting, etc., and then proceed to acquire his knowledge of research methods in connection with the subject of the library he has entered and under the direction of those who are already experts in that subject.

The new syllabus of the School of Librarianship has been constructed to overcome these difficulties, as far as it is possible to do so in a school which is training candidates for admission to all kinds of

libraries. The changes coming into force next session involve little alteration of the subjects taught, but a considerable difference will be found in the emphasis placed on them. In the first place, whereas the old syllabus made it compulsory for every student, including science graduates, to devote four hours a week to English literature, this subject is now dropped entirely for all post-graduate students, in the belief that we should not attempt to advance a student's general education beyond the point reached in his degree work. On the same principle, the history of science, hitherto permitted as an alternative to palaeography in the case of science graduates and occupying three hours a week, is also given up.

The omission of these two subjects left the course entirely technical in character, but three important additions have been made which will do something to preserve its academic character. First, the language side is to be strengthened by including German as a subject which must be offered for the diploma, in addition to French and Latin, or French and another modern language. We shall at first have to be content with very elementary German, but hope to reach a higher standard as time goes on, but from the beginning an attempt will be made to acquaint students with the technical vocabulary of librarianship, and, in the case of science graduates, with the vocabulary of science as well. Secondly, reference work, a new subject in English librarianship is given an hour a week and will include training in the use of all kinds of reference material, with opportunities for practice in investigation and the compilation of subject bibliographies. The ample resources available in the London libraries make it possible to set fairly severe problems and make students ferret out information for themselves. Thirdly, every post-graduate student will be required to offer a special subject consisting of a modest piece of research work, generally of a bibliographical kind. Such work will be arranged individually in consultation with the Director and other members of the College staff, and will take the form of original investigation into the material available on a particular subject; the subjects selected will be as far as possible appropriate to the work already done by each student for his degree examination. It is hoped that some of the results of these investigations may be suitable for publication. By this means we trust that our students when their course of training is completed, may already have some training in research work, and be suitable for employment in research libraries.

A further important change is in the increased time allotted to cataloguing and classification. These subjects, although severely technical and not necessarily requiring an advanced education for their successful performance, are none the less fundamental to the preparation of any material for its use by the public, besides providing an indispensable means of training in minute accuracy of method. The cutting away of English literature and the history of science has made it possible to extend the time devoted to these subjects, and we have appointed a full-time lecturer to teach them. She will be able to give ample time to individual teaching, as it will be possible for her students to be grouped in quite small classes and given a thorough drilling in all branches of the subjects.

You will remember that under our old syllabus we provided two courses, one conforming more or less to the syllabus of the Library

Association and providing a training for assistants in general libraries, and one, instituted in 1929, providing alternatives for special library work. This system presupposed a decision on the part of candidates seeking admission to the school to take either one course or the other, irrespective of their suitability in character or temperament for a particular kind of library. It is felt that specialisation should not begin so early as this and in future the first term of the one-year course will be general, except that science graduates will be exempt from palaeography. At the end of this term those likely to be suitable for special library work, especially those with the best knowledge of modern languages, will be picked out for specialisation and will be allowed to attend the lectures in special library services hitherto permitted only to science graduates. Their lessons in cataloguing, classification and reference work will also be given emphasis in this direction, and their practical work, now for the first time to be an integral part of the course, will be performed in special or university libraries instead of in public libraries. Our new curriculum, therefore, will provide for the sorting out of the raw material passing through our hands, and its gradual adaptation to different purposes by specialisation in two directions—in subject background by means of research work and in administrative knowledge by variation of the technical lectures and practical work.

We come lastly to the hardest task of all, the selection of the raw material itself. We cannot, I think, be too careful in the selection of candidates for admission, and with all the care in the world we must sometimes make mistakes. We are, however, insisting in future on a good honours degree, a first or a second class, as an entrance requirement to the postgraduate course, though we shall still admit undergraduate students for the two-year course, more especially if they can show a good knowledge of languages. The school will also accept for training, either full-time or part-time assistants already employed in libraries provided their education is such as to make them fit to take the course. Nevertheless there is a grave risk that in either case we may fail to obtain exactly the right type of student. Hitherto very few science graduates have taken advantage of the facilities for special library training, far fewer than the profession ought to be able to absorb; consequently the candidates available for employment have not always been of such good quality as I should like to see. The head of one scientific library has told me that he has failed so far to find among our students any suitable for his work. Possibly the general level of salaries has something to do with it, but whatever the reason, it is certain that so far the School of Librarianship has failed to attract the really first class science man. The School would welcome therefore a spirit of close co-operation on the part of directors of special libraries, who might do much to help by keeping a look-out for young men and women who are likely to prove suitable for employment and sending them to us for training with some hope of an adequately paid post at the end of the course. Moreover, we should be glad if you would send us the best of your assistants, those in fact whom you can scarcely spare or who are showing such promise as is likely to mark them for promotion to posts of responsibility. We don't want those who are inefficient or lack initiative; they only keep back our more capable students and fray the nerves of those who

have to teach them, for no course of training can turn an inefficient assistant into a useful one. We need those who are keen and anxious to learn and will enter appreciatively into the course laid before them. We shall welcome such assistants as students either for the University diploma or for the intermediate or final examinations of the Library Association.

I hope that the discussion on this question will be fruitful of suggestions. Six years ago ASLIB was good enough to offer the University its advice, and if not all the advice offered was taken, at least some results were forthcoming. The University will be glad to have further advice and will welcome all the co-operation that you feel able to give.

(Continued from p. 41)

Not only was knowledge of cataloguing, classification, filing methods, etc., an essential, but also acquaintance with outside sources of information and methods of co-operation. In fact the trained person knew "how"—how to get information, how to preserve it when found, and how to serve it up on demand. Librarianship was just as important, surely, as, say, book-keeping, and no scientist would be appreciated as book-keeper in a chemical establishment because he knew all about chemistry.

MR. COWLEY, answering the discussion, said that he still believed in the honours graduate as a candidate for special library training. He found that people with a general degree were not so quick to learn details of routine and accuracy as the honours man. However, he wanted as much advice and criticism as he could get.

DR. HOMER, in answering the discussion, said that when the Staff of a Bureau of Technical Information was limited, scientific training was essential, since all the work was mainly scientific. This meant that the library work, such as it was, had also to be done by scientific workers. However, in a big bureau there would be enough work of a true library character to engage the services of a proper librarian, but in this case he would be the assistant and the scientific man the head.

MISS GERTRUDE LOWE (Library of the John Price Jones Corporation) said that the same sort of discussion as had taken place that morning was going on in America. She invited members to be present at the next meeting of the American Association which was to take place in Canada. She also made references, arising out of the ASLIB Book-list, to the "Technical Book Review Index," published by the Special Libraries Association of America.

The Functions of a Technical Information Bureau.

By E. S. HEDGES, D.Sc., M.Sc., Ph.D., A.I.C., and C. E. HOMER, B.Sc., Ph.D.

A feature of modern industrial organisation is the development of industrial research associations, the aims of which are in general to improve the products into which their material enters and to find new spheres of application for the material. Progress in these directions is based essentially on fundamental research conducted in the laboratory, but experience has shown that it is facilitated by the existence of a technical information service having the same interests. Since the pioneer work of the British Non-Ferrous Metals Research Association and other bodies in initiating and recognising the importance of the technical information bureau as an aid to industrial research and development, such bureaux have become widely established.

The present article describes some of the activities of the Bureau of Technical Information of the International Tin Research and Development Council. A study of the various activities should help to indicate the type of mind required for the work described and thus stimulate discussion as to the training which is best fitted to produce the necessary qualifications. The type of information service under consideration is specialised, and it is not claimed that the same principles are generally applicable to all information bureaux; nevertheless, it is believed that such principles may be applied in large measure to an important branch of information service, namely, that attached to an industrial research organisation.

Such a bureau can easily become a store of information which is collected and classified. In these functions it acts as a special library and is of great use as a servant to others who are engaged in active research on definite lines or in compiling specialised information from the original literature. In both cases the seekers after knowledge generally know what they want, and the librarian can help them to find it, provided that his knowledge of the subject is sufficient to enable him to understand their requirements.

The usefulness of the bureau may be increased by maintaining a detailed subject index and by providing abstracts or brief digests of the information available, especially if such abstracts are circulated to interested parties. The information service is then of use to those whose work is of such a nature that they cannot know exactly what information they require, and thus plays its part in the inspiration of original work. Unless the person in charge has a general scientific knowledge at least equivalent to that required for a University degree in science he cannot satisfactorily undertake this abstracting; the mere collection of existing, published abstracts is generally insufficient, as the features which interest the organisation concerned have not been borne in mind in making such abstracts. Alternatively he may superintend the work of the department and rely on a trained abstractor, who acts as his assistant.

In any case, a department modelled on the above lines is a subservient feature of the organisation to which it belongs, to be used as and when its services are called for. On the other hand, the present authors hold the view that a technical information bureau should be an executive instrument in itself. The collection of information should be regarded only as a means to an end, and the bureau should be able from its store of information to compile its own special publications, such as monographs on subjects of interest to the industry concerned. It should also be able to deal directly with technical enquiries. The application of technical information to industrial practice is beset with difficulties, which can be appreciated only by those who have had many years of research and technical experience. Even then, satisfactory advice is generally the result of collaboration with others of the research and development staff. In many cases a laboratory investigation is involved in such enquiries, while in others it is necessary to obtain information from specialised external sources. Clearly a high degree of scientific training is required in order to obtain the best results from such contacts. In general, it may be said that as scientific and technical progress depends on work done in the research laboratory, so the ultimate value of a technical information bureau depends on its ability to co-operate with the research laboratory.

This aspect is particularly important in the relation of the bureau to the research staff. The bureau can become a powerful research instrument by following a policy of close collaboration with the Director of Research. It has unrivalled facilities for studying the trend of researches being conducted outside the organisation and for perceiving the requirements of industry. This collaboration, which the authors believe to be of the highest importance for the virility of the whole organisation, cannot be successful unless the senior members of the staff of the bureau have had experience in research. The requisite outlook cannot be obtained outside the research laboratory.

The following brief account of some of the activities of the Bureau of Technical Information of the International Tin Research and Development Council illustrates a number of the principles discussed above. The Bureau is under the control of the Director of Research, whose sanction is necessary for all its major activities, but it enjoys a considerable amount of independence, particularly with regard to internal arrangements. Its growth in personnel has been rapid, increasing during a period of less than three years from one member to a staff of ten. This healthy growth is the direct result of the policy of raising the bureau from the rank of an information store and utilising it in an executive capacity, coupled with constant, close collaboration with the Director of Research.

THE COLLECTION OF INFORMATION.

It is a function of the Bureau to select from the enormous volume of scientific and technical literature that which is likely to be of use to the organisation. This necessitates considerable discrimination, since whilst it is important that so far as possible nothing is missed, it is equally important to avoid diluting the useful information with matter which is of no value. If the person responsible for making this selection is to do so satisfactorily, he must be fully conversant

with every aspect of the work of the organisation, and with the characteristics and requirements of the industries which it serves. To the organisation under discussion, all literature dealing specifically with tin or its alloys or compounds is obviously of interest, but there is in addition a large volume of information which is of considerable value although it makes no reference to tin. The latter may be useful either as showing how other materials are competing with tin, or because it contains accounts of fundamental work or methods of research which may be applied to problems in which the organisation is interested. It is necessary to consider each item of information from these points of view, when deciding whether it is to be filed and indexed for future reference.

Abstracts.

Information is collected by the Bureau in several forms, of which one of the most important consists of abstracts of the scientific and technical literature. The policy adopted is to abstract regularly about 150 of the more important periodicals, and to supplement this work by a regular search of the abstracts published by other bodies. Abstracts prepared by members of the staff are written in greater detail than is usual in published abstracts, and are oriented from the viewpoint of the interests and requirements of the organisation. In many cases they render it unnecessary for the reader to consult the original paper.

Reprints of Original Papers.

However useful a good abstract may be, it is advisable to have also a copy of the original paper or article. A certain number of journals and periodicals are received regularly by the Bureau, but it is not feasible to buy every periodical which might possibly contain something of interest. The policy of writing to the authors of important papers and articles, asking them to supply reprints, has proved successful not only in building up a useful library, but also in making valuable contacts with scientific and technical workers in all parts of the world. When reprints cannot be obtained from the authors, isolated numbers of periodicals containing the papers required may be purchased, or borrowed from a library and copied or translated.

Periodicals.

Among the periodicals taken regularly by the Bureau, the journals of scientific societies and other publications of similar standing are kept complete, and are bound and stored in the library. The rest of the periodicals are cut up after a week or month, the articles required are filed with the reprints or abstracts, and the remainder discarded.

Patent Literature.

In addition to the current scientific and technical literature, a regular survey is made of the patent literature of Great Britain, United States, France, and Germany. Official abridgments of the specifications issued in the first two countries are purchased, and those of interest are cut out for filing. French and German patents are abstracted from the whole specifications. Information as to patent specifications issued by other countries is obtained indirectly through various published abstracts.

Trade Literature.

In an industrial research organisation a knowledge of trends in the industrial application of the products in which the organisation is interested is of considerable importance. Much useful information of this kind has been obtained by collecting catalogues and trade literature. In many cases the request for catalogues has been followed up by personal contact with a representative of the firm in question, and has led to an exchange of information.

Photographs.

In a similar way, photographs have been collected illustrating the different applications of tin, its alloys and compounds and the industrial processes connected with them. Numerous photographs have been given by industrial organisations, and where the available photographs were inadequate firms have allowed members of the staff to take photographs of products and processes in their works. At present the collection of photographs of this type numbers about 700 and has already proved of value in the production of publications.

A collection of photographs of a different type has been made possible by collaboration with the Council's research investigators, who send to the Bureau one copy of each photomicrograph or other photograph taken in the course of their research work, together with all relevant particulars. These are useful not only to draw upon for publications, but in knitting together certain aspects of different lines of research.

Other Sources of Information.

Information is continually being acquired by means less formal than those enumerated, e.g. by visits to works and research laboratories, by discussion with scientific acquaintances or visitors, and by correspondence with research workers throughout the world. The last method is regarded as important, not only for the intrinsic value of the information received, but from the broad viewpoint of scientific collaboration. The files of the Bureau record nearly 1,000 foreign correspondents in thirty-four different countries. A separate foreign contact index is kept, which records contacts with investigators and industrial organisations in each country, and gives brief notes on the interests of the correspondents and the nature of the collaboration arranged.

The rate of increase of information acquired by the principal methods described is shown graphically in Fig. 1.

FILING AND INDEXING.

An essential part of the internal work of the Bureau is to file the collected information and make it available for future reference. The system of indexing is based on the use of a card index, but is made sufficiently elastic to cater for the varying requirements of different forms of information.

A standard indexing procedure is applied to abstracts, complete papers and articles, catalogues and trade literature, and books. Each

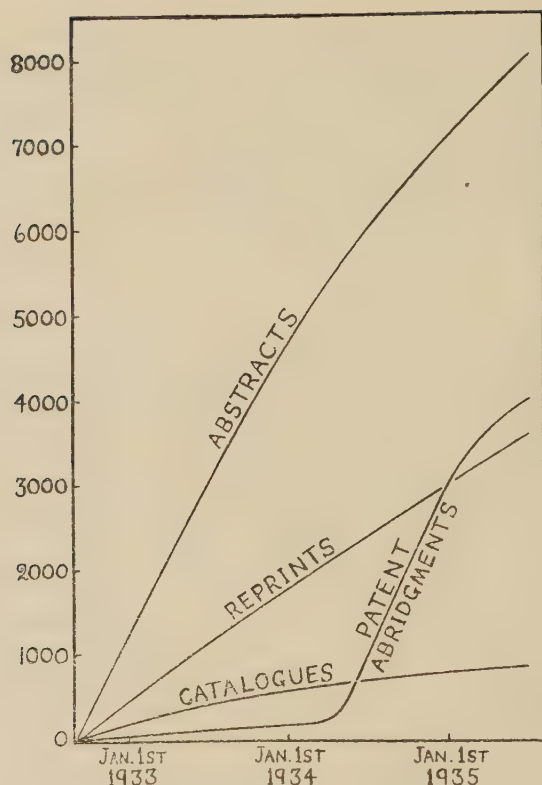


FIG. 1. Rate of Collection of Information.

item of information received is numbered serially, different series being employed for the different sections (abstracts, reprints, catalogues, etc.), and is filed in numerical order in its own section. Author and subject indexes are kept. A card is made for each author's name appearing on the abstract or paper, or for the name of the firm issuing a catalogue. These cards, which are filed as an alphabetical author index, show the title and reference of the publication, and the serial number which has been allotted to it.

Whereas the numbering and author-indexing are purely clerical work, the subject index calls for scientific training. An item of information may be subject-indexed under any number of headings according to the number of topics it deals with, but usually two or three suffice. In this work it is necessary not only to understand the paper, but also to appreciate which aspects of it are of importance to the organisation. It is obviously impracticable to index every topic which is touched upon in a comprehensive paper, but it is essential that no important point shall be overlooked. Many such points may be only of secondary interest to the author of the paper and therefore inconspicuous. Having appreciated the significance of the various aspects of the information, the indexer must place it under such headings that it will be found by the person who may be in need of it. This

entails a knowledge of the viewpoint of the research staff and others who may be using the index.

A different system is adopted for patent abridgments, since these do not as a rule require the cross indexing demanded by research papers, and can be divided into a smaller number of sections. Moreover, the titles convey very little as to the subject of the patent. The plan adopted is to classify patents in about forty-five different sections, each stored in a separate folder and subject-indexed as a whole. Each patent is individually author-indexed and all are arranged in numerical order in each section. Complete specifications of important patents are obtained and stored separately, notes being made on the corresponding abridgments to indicate that they are available.

The two photograph collections are simply classified in sections and stored in albums. Information relating to each photograph is typed beneath it, and no indexing is necessary.

The subject index of the Bureau has 185 main sections, many of which are sub-divided, to give about 500 sub-sections. This index covers all the abstracts, papers, articles, books, catalogues and trade literature, patents, research reports, information reports, and correspondence of technical interest. The number of index cards at the present time exceeds 50,000.

THE DISTRIBUTION OF INFORMATION.

An information service which distributes in-coming information to interested quarters can be more effective than one which merely renders the information available on request. The information acquired by the Bureau is disseminated in a number of ways, which cover both these methods.

A regular information service is given to members of the Council's staff by issuing periodically, in classified form, all the abstracts that have been received during the period. Similarly, classified catalogues of original papers and books received are issued at suitable intervals. Although only one or two sections of this information may have a definite bearing on the work in which an investigator is engaged, he may derive useful ideas from the sections devoted to entirely different subjects.

Requests for specific information are continually received from members of the research staff. Such information may be required in connection with the planning of lines of research, the elucidation of some research problem, or the investigation of industrial possibilities. In special cases the information accumulated in this way is embodied in a report, which provides a useful summary of the subject concerned and is often helpful subsequently in the preparation of publications. Occasionally, translations of important papers written in foreign languages are made and forwarded to those to whom they are likely to be of interest.

Technical Enquiries.

Among other functions, the Council acts in a consulting capacity as a centre of information relating to tin. Technical enquiries are received continually from industrial organisations, research associations, manufacturers of a wide variety of products, and from other

sources in the following countries : Argentine, Australia, Austria, Belgium, Canada, Denmark, Federated Malay States, Finland, France, Germany, Great Britain, Holland, India, Italy, Norway, Poland, Portugal, Spain, Sweden, Switzerland, and the United States. These enquiries are dealt with in the Bureau, and replies are sent out in consultation with the Director of Research. This activity involves a considerable amount of work in all sections of the organisation, as often laboratory tests have to be carried out or visits made to works, but the different aspects of the enquiry are co-ordinated in the Bureau. The curve reproduced in Fig. 2, which indicates the number of technical enquiries received month by month, is interesting in showing how the rate of influx of technical enquiries is steadily increasing as the work of the Council becomes more widely known and appreciated.

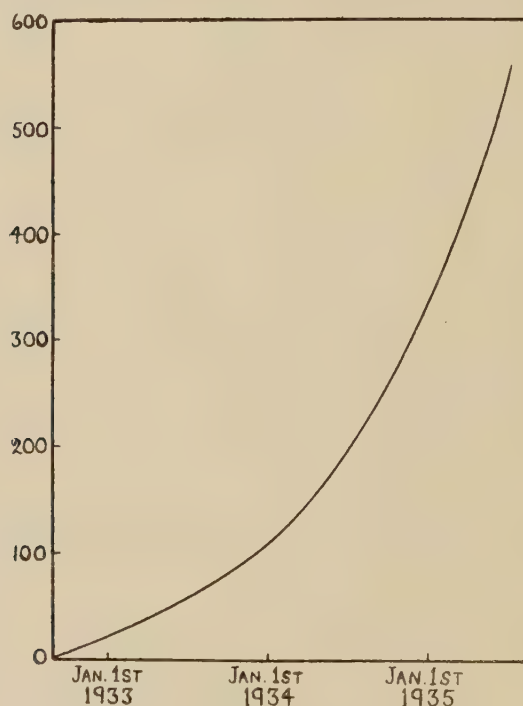


FIG. 2. Rate of Influx of Technical Enquiries.

Publications.

The Bureau is concerned with every phase of the production of the Council's publications, except the monthly Statistical Bulletins, which are issued from the Council's Statistical Office at The Hague. Certain publications are contributed entirely by the Bureau, while in others the Bureau acts in an editorial capacity. The Bureau is also responsible for all the work involved in publishing, including all arrangements with printers, correction of proofs, etc. A number of research papers are submitted by the Council's investigators to scientific societies and published in their transactions; in that case reprints are obtained from

the societies and the Bureau merely arranges for binding them in the Council's covers before distribution. Of thirty-two publications issued by the Council during the last eighteen months, fifteen have been published directly through the Bureau.

The actual distribution of publications naturally forms part of the work of the secretarial staff of the organisation, but the Bureau plays a part in advising with regard to special interests that are likely to be served by each publication, thus ensuring greater efficiency in distribution.

CONCLUSION.

The preceding account indicates the wide range of qualifications essential for the successful organisation and conduct of a technical information bureau. Among these, research experience coupled with a practical outlook and the capacity to appreciate the full significance and relative importance of information received are believed to be the most important. In addition it is essential to be able to read technical literature in other languages and to prepare concise summaries or abstracts of lengthy papers. There must also be a certain amount of literary ability, which can be turned to the tasks of either author or editor. Administrative ability, tact, and other qualities must be taken for granted. In comparison with these major requirements, library routine is of secondary importance.

A combination of all these qualities is not often found in an individual; in general a staff will sooner or later be built up in such a way as to give good balance of the characteristics of its members. In this respect the librarian may play his part, but in an organisation of the type described, it can only be a subordinate part. A librarian can never gain the scientific outlook except through the usual scientific training in the laboratory. On the other hand, the authors think that a trained scientist who intends to undertake work of this kind would benefit by a short course of study of library routine.

Information Work as a Career for the Scientist.

By B. FULLMAN, B.Sc., A.I.C.

(Information Officer, British Non-Ferrous Metals Research Association).

The organisation and operation of various kinds of special libraries and information bureaux will no doubt be adequately dealt with by other contributors to this symposium. The present note is therefore devoted to another aspect of the subject, i.e., the part which the trained scientist can play in such organisations and the prospects which they offer him. Attention will mainly be paid to the information side, though some reference will necessarily be made to the library aspect.

Organised information work is at present only in its infancy, but all the signs indicate that if sufficient effort is exerted by ASLIB and kindred organisations, it should develop greatly in the next few years, in the direction of the establishment of many more individual information departments. In view of the fact that in almost any organisation an efficient Information Department, once established, very soon becomes indispensable, it is astonishing that the need for such departments has only been realised in the last few years. A large proportion of those existing have arisen accidentally rather than from any pre-conceived plan; their parent organisations have, so to say, only muddled into them; and in some instances their existence is due to the energy of some member of the organisation's staff whose flair for information work has led to the crystallisation of a department round him.

If information departments are to function in their most efficient way, their staffs must be recruited from first-class material. As far as scientific and technical staffs are concerned, a rather special point arises. Hitherto some scientific workers have been apt to look down on those of their colleagues who work in the library. One of the objects of this note is to indicate that this attitude is a mistaken one. The information worker can do much for the advancement of science and industry; and the present writer hopes to show, towards the end of this note, how such workers may do their share of original thinking. The prejudice mentioned has in part been due to the fact that until recent times information work has been largely passive. Only latterly have information departments learned that their duties do not end merely in storing and cataloguing information: their most important successes are achieved by an active policy, whereby their information is brought to the notice of those who need it. The prejudice is now disappearing; scientists and technicians are beginning to recognise that the man in the library can be of great service to them. It is only fair to add that in some organisations (among which the writer is happy to number his own) the prejudice has never existed.

What prospects does information work offer to those of scientific or technical training? We may assume in such people a thorough knowledge of one science, and a greater or lesser acquaintance with

one or more others. In addition, a working knowledge of one or more foreign languages is imperative in information work to permit of the efficient handling of foreign literature.

As was indicated above, this note will not deal at length with matters of librarianship. Nevertheless, it may be pointed out that individuals having the qualifications outlined above can play a very important part in purely library work. This is not the place for a long discussion of the thorny subjects of cataloguing and indexing. It is obvious, however, that a specialised scientific training can be of great service in the efficient cataloguing and indexing of scientific literature. This is especially the case in organisations where the catalogues and indexes are used by workers other than the library staff. This is no attempt to belittle the librarian as such. He can go (and for many years has gone) a long way towards the provision of adequate catalogues and indexes. But he can benefit greatly by making use of the services of his scientific colleagues. In the first place, he might well call them in to help to devise the details of the classification to be used; and subsequently to assist in the cataloguing of any given publication. In organisations where the staff is large enough to permit of the provision of an unlimited number of catalogue cards to reveal the contents of each publication in detail, the assistance of a scientific staff is indispensable.

To turn to the purely information side, it goes without saying that the trained scientific specialist who has had experience in handling literature is the person who can best carry out searches for information. He will be wise to work in consultation with the librarian. It is remarkable how much relevant information can be revealed in a short time by a man who spends his life amid books and literature, even when he has had no scientific training. The writer speaks feelingly on this subject, remembering the many occasions when his librarian colleagues, purely from their knowledge of books from the librarian's point of view, have sprung awkward surprises on him. Linked with literature searches are the production of annotated bibliographies and digests of knowledge.

Once a scientific or technical information department becomes widely known, technical enquiries are certain to form a large section of its work. These may involve literature searches, which have been mentioned above. Frequently however a good deal more is required, and in this kind of work a scientifically-trained man of active mind should be in his element.

Translations of foreign literature are in growing demand. The writer's view is that any research organisation of fair size, and many commercial organisations, can make good use of the full-time services of at least one trained scientific translator; he would pay his way handsomely. This is assuming that he has a working knowledge of German and French. If he has other languages also his value would increase accordingly. The standard required for translations is rising steadily. They must be written in the technical language (or jargon!) of the man to whom they are addressed, and they can only be produced by people of sound scientific training and adequate knowledge of the original language used.

In the organisation to which the writer is attached, knowledge of languages has proved useful in a rather special way. It is still a deplor-

able fact (though perhaps a fortunate one from the information worker's point of view) that a large number of research workers are unable to read foreign literature easily. Such workers can save much time and spare themselves much annoyance if they can sit down beside a colleague who can rapidly give them the gist of a foreign paper; or if necessary, rapidly read out a verbatim translation of its most important parts. This method is really a half-way house between a full abstract and the preparation of a detailed translation, and can only be operated effectively by those who combine technical knowledge with linguistic ability. It is very useful where a researcher is himself making a digest of knowledge. He can thus often learn all he wants to know about a paper without putting the information department to the time and trouble of preparing a full formal translation; he can often decide at once that a complete translation would be a waste of time. In our organisation this process is in daily operation, and is much appreciated by the research staff, who indicate their approval by making incessant use of it, somewhat to the discomfort of the linguists of the information department.

Finally there is an aspect of information work which has so far hardly received proper recognition, but which may be of outstanding importance in the future. An information worker of scientific training who has his wits about him is in a very strong position. He is bound to acquire a considerable specialised knowledge. If he keeps in close touch with all that goes on in his own organisation and handles his colleagues in other departments tactfully, he will probably find as time goes on that they come to him not only for information but for advice. He can often offer useful suggestions, either bearing on work in progress or even as regards new researches in fields where knowledge is lacking. A man of first-class training and original mind can in this way directly or indirectly exert much influence on the work of his organisation. At the same time he will be able to keep alive his enthusiasm for his special subject. Of course, it is possible to have too much of a good thing. An information worker who neglected his routine duties and spent all his time merely in teaching other people their business would be an unmitigated nuisance; but on the other hand the possibilities of original thought must not be lost sight of in a well-balanced department.

The notes given above are an indication, though an incomplete one, of the various ways in which those of scientific training can apply their knowledge to information work. To many such people, work in a special library or information department may seem from the outside a routine task and a dead end. The attitude outlined above indicates that on the contrary research-minded people can, in the course of ordinary information service, do a great deal of really original thinking. Moreover, they get a unique opportunity of making use of any general knowledge outside their special field, for once an organisation acquires real confidence in its information department it will turn to the department for assistance in every conceivable direction.

The success attending information work, and the rewards accruing from it, are of course largely dependent on the personality of those engaged in it. It is not a blind alley. People of the right calibre and qualifications who take it up can reasonably hope to carve out a good

career for themselves. A wide extension of this kind of work will not only be of great benefit to the community at large, but will create a demand for a considerable number of highly-trained people. Particularly at this time, an emphasis on the latter point might arouse an interest in information work in some quarters where its importance is at present overlooked.

(Continued from p. 43)

of training its members really required from the School of Librarianship. Mr. A. BLAKE suggested that greater co-operation in the training of librarians was required between schools of librarianship and the libraries. For example, special libraries might co-operate with Mr. Cowley and allow the students to get practical experience in the special libraries while they were being trained at the school. (This method being like the "Sandwich" method in vogue in engineering training.) Such co-operation would also assist in adjusting supply to demand where special librarians were concerned. Mr. CHARLES NOWELL touched on the importance, where special librarians were concerned, of a broad general education, which, he thought, was better than a specialised honours course. He also dealt with the question of remuneration of special librarians, and held the view that until there was a higher standard of remuneration in the special libraries, the best of the material would never be attracted to them. PROFESSOR HUTTON thought that one of the primary necessities for the training of special librarians was the careful pre-selection of candidates for training. He had a great respect for professional library training, and was not certain if a scientifically trained person was the best person to deal with such matters as the classification, filing, and indexing of materials. He also referred to a paper by Mr. A. F. Ridley on "The Training of Special Librarians" which had a bearing on Mr. Milward's remarks.

Mr. R. BRIGHTMAN suggested that positions which might be filled by trainees from a school of librarianship were of three types: (1) heads of fair-sized information departments at special libraries employing several technical assistants; (2) the assistants in such departments or special libraries; and (3) individual positions in which the special libraries had no other technical assistants. So far as special libraries or information departments dealing with scientific matters were concerned, a scientific training was all in cases essential. For the first class of appointment, however, administrative ability and ripe experience of the problems of the industry was the first essential, and such positions would usually be recruited from within the undertaking in the same way as other senior managerial posts. For the one man position, the question as to whether experience of the industry or science or knowledge of library methods and the like should come first was possibly debatable but both were required. It was doubtful whether a school of librarianship could provide trainees capable immediately of filling such positions. Their main utility was likely to be in providing recruits for the second type of post, that of technical assistant. Mr. Brightman referred to difficulties experienced in obtaining the right type of recruit for such posts particularly in respect of linguistic ability.

Mr. B. M. HEADICAR said that this problem was a hardy annual for ASLIB and it still remained indefinite. While there might be exceptional cases where the qualified scientist might be the best man to have charge of the information bureau and library, the thing that almost broke one's heart was the huge number of instances where a newly-formed bureau was placed in the charge of some clerk or other, not too well fitted to his present job. Indexing, filing, and the like were not tasks for the novice or even the scientist, who should be able to use his abilities on his learned subjects and, while supervising the special requirements of the information bureau, should leave the technical librarianship work to those who know how to do it. Mr. Headicar mentioned that he had been told that qualified librarians had been appointed in some instances and had proved real failures. He knew of one or two cases of the kind where the qualified person had been forbidden to undo anything previously in practice, or had been compelled to learn amateur schemes, obviously unsound, while all the time realising that a complete re-organisation was the only proper way to ensure the success of the library part of the business. Even a correct method of alphabetising had been rejected because those previously responsible could not have borne to acknowledge that their own ideas were incorrect.

(Continued on p. 29)

Recruitment, Training and Future Possibilities for Special Library Staff.

BY T. M. HERBERT, M.A.

(Research Manager, London Midland and Scottish Railway.)

The need for a library and information service at the disposal of an industrial research laboratory is now becoming more generally recognised, and in the early stages of setting up such a service the difficult problem arises as to how best to expend what is usually a limited amount of money to the greatest advantage. The choice is essentially one as between expenditure on books and employment of staff. Except in extremely isolated localities, where borrowing facilities are limited, there is much to be said in favour of limiting the initial expenditure on material in favour of the appointment of a "librarian". What, then, should be the training and functions of such an individual?

Clearly, he will have but little to do as a mere curator of books. His main function, under the conditions outlined above, will be to help the staff of the laboratory to use literature to the best advantage, and this will very largely involve using other people's books and publications. He must, therefore, be a man—or woman—capable of making contacts and of maintaining good relations with other libraries and sources of information. He should know sufficient of the subjects most likely to be dealt with to be able on occasions to make suggestions as to promising sources to consult, since many of the staff may not have been in the habit of consulting published work in the past. Finally, he should have a knowledge of languages, particularly, of course, German and French, for there is still a regrettable aversion to languages among laboratory workers, despite de la Bruyere's words—"Languages are no more than the keys of the sciences. He who despises one slights the other". Should the candidate then be mainly a trained librarian, a technician or a linguist, for except in rare cases it is too much to expect all three qualifications? It would be heresy in such a symposium as this to suggest that the qualification of librarian is perhaps the least important, but there is much to be said, at the start of a small special library of this nature, for paying at least as much attention to an applicant's knowledge of languages and of the subjects in which he will have to deal. He has perforce to act as a "Jack of all trades", and a few mistakes in library technique will be less disastrous, during early years, than inability to render the day-to-day assistance which the laboratory staff will demand. The need for enthusiasm and common sense will be recognised by all.

Appreciation of the value of these small special libraries—for that is, in effect, what they are despite their initial paucity of books—seems likely to increase, and if, during the early years of development, their usefulness is real and sustained, many, at any rate, will in time grow to more ambitious dimensions. The library proper will increase

and there will be sufficient work both for a librarian proper and a full-time translator. The prospects, therefore, for those who undertake the task of initiating the simple organisation will in no small degree depend upon their own initiative and ability.

DISCUSSION.

MISS D. W. HUGHES, opening the meeting, said: The subject for discussion was a most important one for Librarians, though her own personal acquaintance with it was limited to the question of recruitment. On that point she had made a recent enquiry among University Appointments Boards as to the attitude of students to Special Librarianship as a Career. The replies she received showed clearly that with the exception of London University, students at the universities either did not know of the development of special librarianship, or if they did know regarded the prospects of the work and the chances of getting an appointment as too limited to justify much expectation of a career. A young profession such as Special Librarianship should take note of this important point for essentially a young profession must concern itself with recruitment, standards of attainment, and, above all, the question of supply and demand.

Following the papers, of which Mr. Herbert's and Mr. Fullman's were taken as read, some notes by way of amplification of Mr. Fullman's paper were contributed by MR. F. H. SMITH. (A summary is given below but the full text can be seen on application to the ASLIB office.) Mr. Smith confirmed that in many cases Information Departments had arisen accidentally rather than from design. One unfortunate aspect of this development had been that in the past, information work in its early stages had been too often entrusted to a junior member of the staff. The system adopted, though faulty, might function more or less satisfactorily for a time, but, as the scope widened, the systems of classification and indexing inevitably would come to depend more and more upon the memory of those in charge until it was realised that complete re-organisation was necessary. It could not be too strongly emphasised, therefore, that all branches of an Information Department must be well organised from the very first upon a sure foundation by a Staff with adequate *Library and Scientific Training*, to permit readily of an unlimited expansion along the lines originally fixed. Speaking particularly of Special Libraries and Information Departments in industrial undertakings and research associations, Mr. Smith said that it was essential that the Library Staff should have, in addition to a sound training in classification and indexing, a thorough scientific training, preferably including both research and works experience, to enable them to understand and appreciate fully the difficulties with which the technical departments were confronted when making their enquiries for information. With regard to translations, while certain articles published in foreign journals might be of sufficient interest to justify a full translation, later carefully indexed and filed, cases frequently arose where the paper was only of passing interest. In many such cases it might be sufficient to read a verbatim translation of the relevant part of the paper to the research worker, but the disadvantage of this method was that there remained no permanent record of the translation. From the translator's point of view, the time spent would not be very different from that required to dictate a translation to a typist typing the translation directly on the machine. Mr. Smith concluded by a few words with regard to a specialised extension of information work, in which the scientist information worker might prove of invaluable assistance to the organisation to which he is attached. Every undertaking that maintained an active research department was certain to make discoveries which might be of great potential commercial value, and, in order to safeguard its interests, patent protection would be sought. He believed that the best results in patent work would be achieved by a happy combination of the scientist information worker with a knowledge of patent matters, and a professional patent agent with his expert knowledge of patent law and procedure and sufficient technical knowledge to appreciate fully the technical data laid before him.

MR. G. R. CRONE, in regard to the matter of the training of special librarians, emphasised the importance of putting the scientific training before training in librarianship. MR. G. E. MILWARD took the view that at present education in librarianship laid too much stress on academic matters. He also suggested that by questionnaire, or otherwise, to its members, ASLIB should find out what sort

(Continued on p. 41)

Introductory Notes on the New University Library at Cambridge.

By H. C. STANFORD, M.C., M.A.

Of the beginnings of our University Library there are no precise records. We know that the Divinity School with the chapel above it was completed in 1400 A.D., and there is little doubt that here were kept such books as the University had acquired by that date. But a nucleus must have been formed at an earlier time, for we read in the British Museum Arundel MS. No. 350 that on Sunday, 16th June, 1381, during the rising in East Anglia, the rioters who in the previous April had broken into the University Treasury and abstracted many charters and muniments which they burned, entered the monastery of the Carmelite Brothers (which stood on the present site of Queens' College) and seized a chest standing in their church, full of books and valuables belonging to the University. And before 1397 William Pickworth, Provincial Prior of the Dominicans in England, had made a note in a manuscript now in the Vatican to the effect that he had with his own hand written the manuscript, and that it was chained in the Common Library at Cambridge.

The earliest building erected specifically as a Library had been finished in 1444: additions to this were made from time to time down the centuries, the last of these being built in 1842. After this date there followed a period of absorption lasting until 1908, by which time all the rooms of the Old Schools, which stood under the same roof as the Library, had been engulfed by it. But still the growing monster clamoured for more, and by 1918 it had become clear that if no outlet were found for the ever-growing collections congestion would paralyse the usefulness of the Library. Basements were therefore acquired in various parts of the town, fitted with shelving, and used as storehouses for the overflow; by 1930 six such annexes had been established, and no more were to be found.

But for long it had been recognised that the numerous devices contrived with a view to solving the problem presented by lack of room were palliatives rather than cures, and in 1920 the University appointed a Syndicate to consider the needs of the Library and the best means of satisfying them. The outcome of the deliberations of this body was the decision reached in 1924 to build a new Library on a new site, and to ask Sir Giles Gilbert Scott to undertake its design.

Four years later the munificent benefaction of the International Education Board, founded by Mr. John D. Rockefeller, enabled the University to carry out this ambitious undertaking. The total sum to be found was £500,000; of this Mr. Rockefeller's foundation offered half—a benefaction without parallel in the history of our University. The remaining half was contributed by the University, its sons, and well wishers.

The plans prepared by Sir Giles Scott were in due season approved, and it was decided to proceed to build on the Queens' Road site, which the University had acquired from King's and Clare Colleges.

A geological fault ten feet below the surface of the selected site made piling necessary, and on 29th September, 1931, the first pile was driven. In all 1,380 piles 14 inches square and varying in length from 12 to 45 feet were driven in during the next ten months, and on these a vast concrete raft was constructed. On 1st October, 1932, the first stone of the new Library was laid, and by the Spring of 1934 the building was finished. The builders were Messrs. Rattee and Kett, of this town.

On the 31st of May, 1934, the doors of the old Library closed, and at 8 a.m. next morning the move to the new building began. The books were packed in specially designed boxes by our own staff, and conveyed on horse-drawn lorries to their new home, where they were unpacked and put on their previously allotted shelves, again by our own staff. A lorry carried from 30 to 36 boxes on each of its journeys. In all, 689 lorry-loads made the journey between the two buildings, carrying 23,725 boxes of books. In addition there were 25 motor van loads of bound volumes of newspapers, and about 20 motor van loads of elephant folios too large for any box; while a number of pantechnicons transferred certain furniture, bindery and workshop equipment, and the like. The time allowed for the move was four months; but at 3 p.m. on 26th July we were able to ring up the Vice-Chancellor and announce the completion of the move in half the allotted time.

Let us come now to a description of the building which Sir Giles has given us.

In designing the Library Sir Giles had as his primary object the creation of a simple and dignified building; and in order to attain this end he has placed suitability for its purpose before all other considerations—and this without the loss of beauty. He never forgot that he was building a working library whose principal function was to provide the best possible service to those who were to use it: and to this function he has sacrificed throughout any wish he may have felt to indulge in exterior embellishment. The same spirit is to be observed inside the building too. A noticeable instance of this restraint is afforded by the bookcases—some forty-three miles of them—whose suitability for their specific purpose was the chief consideration governing their design. But though this has been so the aesthetic side has not been forgotten. The cases are of steel, finished in a pleasant shade of green (now, I believe, listed by the manufacturers as “Cambridge green”!) and have dove-grey ends. The shelves are adjustable, and no stack is more than 7 feet 6 inches high: thus any book is within easy hand-reach, and that bane of libraries, the step-ladder, is eliminated.

To give you a general account of the structure I cannot do better than quote from Sir Giles’ own description of his building. He says, “My aim has been to produce a quiet dignified building, relying for effect upon its main lines rather than on elaboration of detail. By this means the full use of the available funds is made for developing the practical side of the Library without any loss in artistic effect. The characteristic lighting of a modern bookstack, with its long vertical windows, has been taken as a key to the whole design, and, as these features appear throughout most of the building, they impart a distinctive character, not without architectural qualities. The question of a prominent architectural feature such as a tower or a

dome received very careful consideration, and although, generally speaking, the buildings of Cambridge are not distinguished by such features, I felt that this particular building, representing, one might say, the centre of the University's activities, might legitimately be marked by a feature of this kind. The site, having no direct approach, is without any distinction such as would naturally assist in giving prominence to the building: a tower has therefore been adopted, and this, while serving as a vertical bookstack, gives the necessary emphasis to the building. As regards the interior, most of this consists of bookstacks and of course offers no opportunities for architectural treatment. The main Entrance Hall, the Reading Room, and the North and South Galleries are almost the only portions of the interior which lend themselves to architectural effect. Here again simplicity is the keynote, but the general proportions ensure the due element of stateliness."

It is possible that I have revealed myself as an ardent admirer of Sir Giles' work; but it must not be imagined that all Cambridge was equally enthusiastic. Nothing, I think, provokes so much argument or divides people into opposite camps as easily as a question of æsthetics. And nowhere can æsthetics become the subject of bitter controversy so readily as they can in a University town, where nearly every man of culture feels in his heart that he is the ultimate Court of Appeal in such matters. "Factory", "Workhouse", "Hauptbahnhof" were among the criticisms of our building made by a very vocal minority in whom the love of collegiate gothic was deepest rooted; and a rather unholy glee crept over the faces of these folk when the King said at the opening ceremony, "A library such as this is both a power-house and a testing station of educational activities." Who is right—the objectors or the approvers—you will be able to judge for yourselves when you inspect the library in a few minutes' time—in fact, each one of you will be able to garb himself with that mantle of æsthetic infallibility which I mentioned just now.

But let us pass to a rather more detailed account of the building.

It consists of a main façade surmounted by a central tower and flanked by projecting pavilions at its North and South ends. A flight of steps leads up to the main entrance under the tower. Behind this main frontage lie two courts divided by the Catalogue Room and surrounded by stacks on three sides: on the fourth side stands the main Reading Room, and under this the various staff work rooms.

The building is faced with 2-inch hand-made bricks of a lightish Indian red from the kilns near Great Missenden, Buckinghamshire. For the roof small Lombardic tiles have been used. The stone employed for the external facings is from the Clipsham and Weldon quarries; while the dadoes inside the building are made of the blue and brown stone found at Hornton in Oxfordshire.

Inside the main entrance is a large hall which contains the Porters' counter, where all borrowed and returning books are checked. On each side of this are staircases leading to the main floor.

The tower, 157 feet high, contains twelve stack floors over the hall and the administrative centre: the rest of the building has seven floors, except for the pavilions, where there are two only. There are seven passenger lifts.

The following are some of the principal dimensions of the building : Length of façade, 448 feet ; depth from front to back, 218 feet : height of ridge of roof, 72 feet ; inner courts, 83 by 81 feet.

On reaching the first floor from the Entrance Hall and facing the bronze gates leading to the Catalogue Room you have behind you the North and South Fronts and Tower, filled with bookstacks. To right and left of you are the North and South Galleries, where have been fitted up the eighteenth-century book-cases brought from the old library and containing the Royal Library of over 30,000 books and MSS. collected by Bishop Moore of Ely, and which were bought from his executors and presented by King George I in 1715.

Passing through the Catalogue Room and crossing the West Gallery, where treasures are exhibited in wall cases, you reach the main Reading Room (193 feet long, 40 feet wide, and 32 feet high), which contains along its walls and in low bookcases at each end the principal reference books. Here, too, is the superintendent's desk, where enquiries can be made and help obtained.

In the Pavilion at the south end of the South Gallery is the Anderson Room, which provides accommodation for students of MSS. and rare books which are not allowed to leave the Library. Leading off this are the Manuscript and Bradshaw Rooms, which house MSS. and Early Printed books respectively.

The South Wing is entirely devoted to periodicals. On the main floor is a reading room containing the current numbers, which are stacked in steel pigeon-holes in this room and in the gallery on the north side of it. The upper floors of this wing house the bound volumes of periodicals, while the ground floor affords a home to such newspapers and other large periodicals as are kept in the Library.

The North Pavilion contains on the first floor a collection of some 200,000 maps, and on the ground floor the Music Library. At the junction of this pavilion with the North Gallery the Acton Library is kept as a separate unit.

The North Wing contains seven floors of bookstacks which house the greater portion of the more important English and foreign books which have not been placed in special collections.

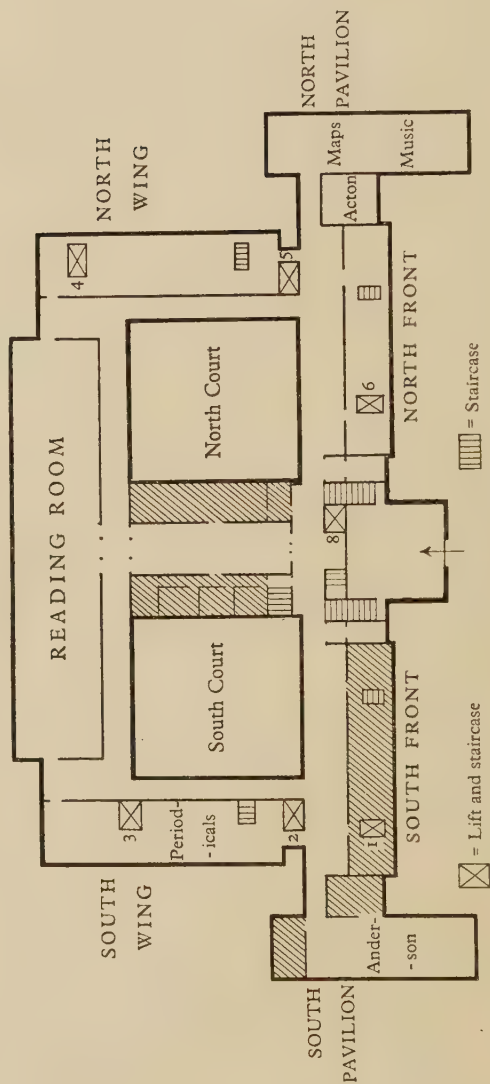
The Library is one of the five copyright Libraries, and is so entitled to receive on demand a copy of all printed matter published in Great Britain and Ireland. It possesses at present about a million and a half printed books, upwards of ten thousand MSS., and many thousand *incunabula*. Annual purchases of foreign books and periodicals amount to about £5,000. Its staff numbers eighty-one.

One of the most valued privileges of members of the University is access to the bookstacks : restriction of this privilege is only imposed for the safeguarding of treasures. The right of senior members of the University—and of junior members through their tutors—to borrow books is as appreciated as it is unusual. These amenities led the great historian, Lord Acton, to describe it as the one really useful great Library in Europe.

And now, I think I have reached a point at which I ought to bring my remarks to a close. Anything which I have omitted here will, I feel sure, be brought to light in the course of your visit to the structure I have tried to describe, while for anything which I have said and which you may feel were better unsaid, I ask your forgiveness.

NEW UNIVERSITY LIBRARY, CAMBRIDGE

PLAN OF FIRST FLOOR



The shaded portions denote rooms to which the public are *not* admitted

The Catalogue Room is the Gallery leading to the Reading Room, in a direct line with the entrance to the Library

[These notes have been provided by the kindness of Mr. Ansell to supplement the description of the New Library by Mr. H. C. Stanford, which will deal mainly with the building and arrangement of the Library.]

Cambridge University Library; Some Notes on its Organisation and Contents

By E. ANSELL, M.A.

1. *Acquisition of books.* The University Library receives its books through three channels, viz.: (i) the Copyright Act, (ii) Purchases, and (iii) Donations and bequests.

(i) The Copyright Act is popularly supposed to confer its benefits on the "deposit" libraries with perfect simplicity of action. Actually, except in the case of the British Museum, publishers are not obliged to send books unless these are claimed; the claims must be made within one year of publication; and the claimability of some books may itself be a matter of doubt. The British Museum has its own delivery Agent; the other five "deposit" libraries have an Agency between them, employing a staff of five.

(ii) Purchases are made of (a) new books and (b) second-hand, old and rare books.

By virtue of the Copyright Act, our purchases of new books (including periodicals) are practically confined to those published abroad. These are systematically recommended by a panel of fifty resident members of the University, each an authority on some particular subject, and to each of whom the national bibliographies of various countries are sent for inspection. A Book Recommendations Subsyndicate meets fortnightly in term to consider the recommendations made by members of the panel or by other members of the University.

A small number of second-hand, old and rare books is also bought; and normally, of course, these have not been recommended in the ways just described. We keep a special look-out for Cambridge items, *Erasmiana*, liturgies, and certain other classes of books.

The sum available annually for all our purchases is about £5,000.

(iii) Donations and bequests constantly enrich the Library. They range from single items to splendid collections, such as those of the incunables, etc., given last year by Mr. A. W. Young and by Sir Stephen Gaselee—and indeed to whole libraries, such as the Royal Library (c. 30,000 vols., given in 1715) and the Acton Library (c. 60,000 vols., given in 1902).

2. *General Catalogue.* The key to the more important printed books in the Library is the General Catalogue. This consists of nearly 700 folio volumes, in which the entries are small printed slips pasted on to blank pages. It is an author catalogue, supplemented by many of the usual form headings, such as Dictionary, Periodicals, etc.

The Catalogue Rules derive from the ones drawn up in 1878 by Henry Bradshaw (Librarian 1867–1886): these were modified in the

light of experience and of subsequent codes (such as that of the A.L.A.) : and they still undergo occasional adjustment or amplification.

For the classification of the books different ideas and different schemes have prevailed at different times in the course of our history ; and, while some collections ought to be reclassified, it would be wasteful of time or destructive of interest to attempt any rearrangement of others.

A few examples from the Catalogue will illustrate some further points.

Cam. b . 925 . 7	26-298
ROBERTS (Sydney Castle). A note on Cambridge printing. (Sonderabzug aus der Gutenberg-Festschrift, Mainz, 1925.)	
	28cm. Mainz, 1925.

703 . d . 93 . 7	35 . 2100
HEADICAR (Bertie Mason). A manual of library organization. (Library Assoc. Ser. of Libr. Manuals, 7.)	
	21cm. London, 1935.

8760 . d . 60	32 .. 629
GRAMMAR (<i>Breton</i>). Colloque français et breton, ou nouveau vocabulaire. Nouv. éd. corrigée et augm.	
	18cm. Saint-Brieuc, 1822.

In these examples the top left-hand corner bears the class-marks ("Cam" = Cambridge Collection, "703" = Popular bibliography, "8760" = Books of lesser importance on Western Languages published in the 19th cent.) ; and in the top right-hand corner are what we call the "printing numbers". From Finding Lists prominently placed in the Catalogue Room and elsewhere, readers ascertain the location of the desired class. The next symbol in the class-marks quoted, a letter, indicates the size of the book. In the first example, "925" denotes the year of publication (1925) ; in the second "93" denotes the decade of publication (1930-39)—a device useful for effecting a roughly chronological arrangement of books within a given class. In each example, the final symbols are the running numbers of the books within the year (or decade), and also within the size, of the class in question. The "printing number" is for staff purposes only : the first figures in the examples shown tell us in what year (1926, '35, '32) the books were catalogued, the punctuation mark then indicates the department which catalogued them (a *dash* for Special Collections, a *full point* for Copyright books, *two full points* for Foreign donations), and the last figures denote the running number of the slip printed by that department within the year shown.

Books which are not in reserved classes are exhibited in the Reading Room for a week immediately after they have been catalogued. They may thus be inspected before they take their places on the shelves.

3. *Other Catalogues.* As an adjunct to the General Catalogue, there is a large card catalogue of books of secondary importance (modern fiction, school textbooks, trade manuals, etc.) which are placed in the Upper Library : there is no public access to the Upper Library, and restrictions exist as to the borrowing of books from it. There are also card catalogues for certain pamphlets and other collections. In

addition, there are ready-reference printed handlists of current English periodicals and of current Foreign periodicals : in short-title form, these quote the entries from the General Catalogue, but they also include periodicals in certain Departmental Libraries. Printed catalogues and bulletins have also been issued for certain special classes of book (e.g. Early English Printed Books) and for certain Special Collections (e.g. the Bradshaw Irish Collection).

4. *Special Collections.* The Library contains several special collections, a list of which may be found on pp. 10- in the Library's *Notes for readers* (see §7 following).

5. *Other libraries in the University.* These may be divided into (i) College libraries and (ii) Departmental libraries.

(i) All the Colleges have their own libraries, many of them with a wealth of old and rare printed books and manuscripts. It is very desirable that there should be some kind of union catalogue of at least sections of the contents of these. Mr. H. M. Adams, Librarian of Trinity College, is at present engaged on such a handlist embracing sixteenth-century foreign books. But the College libraries, besides being rich on the antiquarian side, now also provide the undergraduate with useful collections of modern books.

(ii) Cambridge possesses many Departmental libraries, and also other libraries which, though not properly departmental, yet serve specialised interests. Amongst all of these, to name but a few, are the Squire Law Library, the Balfour Library (zoology), the Marshall Library (economics), the Seeley Memorial Library (history), the libraries of the Fitzwilliam Museum and of the Museum of Classical Archaeology, and that of the Philosophical Society (scientific periodicals). These libraries have their own funds and are the recipients of donations and bequests ; and their links with the University Library, where they exist at all, are for the most part very slender. A special Syndicate, however, is now considering both the needs and functions of the Departmental libraries and their relation to the University Library.

6. *Staff; and maintenance costs.* The staff now numbers 81 all told, of whom the seniors are as follows :—

Librarian :

A. F. Scholfield, M.A.

Under-Librarians :

E. J. Thomas, M.A.

B. F. C. Atkinson, M.A., Ph.D.

F. T. K. Caröe, M.A.

E. Ansell, M.A.

Assistant Under-Librarians :

H. R. Creswick, M.A.

F. J. Norton, M.A.

N. C. Sainsbury, M.A.

R. H. Stringer, B.A.

A. Tilloston, M.A.

Secretary :

H. C. Stanford, M.A.

The total cost of maintaining the new Library (including rates, salaries, purchases, etc.) is expected to amount to about £29,000 a year : of this a substantial amount is available from the endowments provided by the Rockefeller Foundation and also by other benefactors in ancient and modern times.

7. *Bibliography.* Those who desire further information about the University Library may find the following select chronological bibliography of some help :

- (i) Annual reports of the Library Syndicate. 1855—. (Publ. in the *Cambridge University Reporter*, 1871—.)
- (ii) A brief outline of the organisation and methods of the Cambridge University Library. By H. G. Aldis. (*Library Association Record*, Dec., 1905, pp. 625-636.)
- (iii) Annals of Cambridge University Library, 1278-1900. By C. Sayle. *University Library, Cambridge*, 1916.
- (iv) The University Library, Cambridge. By H. G. Aldis. (*J.P.C.K. Helps for Students of History*, 46.) 1922.
- (v) Notes from the history of the Library. By H. C. S[tanford]. (*Cambridge Review*, Oct. 14 and 21, 1927.)
- (vi) Cambridge University Library, 1400-1934; with a description of the new building opened by H.M. the King, 22 Oct., 1934 . . . Collotype illus. Privately pr. *Cambridge University Press*, 1934.
- (vii) Notes for readers. 11th ed. *University Library, Cambridge*, 1934.
- (viii) The new Cambridge University Library. By E. Ansell. (*Library Association Record*, Nov., 1934, pp. 399-413.)
- (ix) The move of the Cambridge University Library. By E. Ansell. (*Library Association Record*, March, 1935, pp. 92-6.)

DISCUSSION.

The Chair was taken by SIR RICHARD GREGORY and the ensuing discussion was contributed to by MR. F. A. HOARE, MR. B. M. HEADICAR, MR. C. NOWELL, MR. H. ROTTENBURG, and MR. BERWICK SAYERS. Mr. Berwick Sayers thought that the fewness of the missing books from the open shelves was remarkable. He took it that the stock-taking was a census and not an actual checking of titles which would seem to be impossible in so large a library. He was the more surprised, in that it was well known that students were the most dangerous patrons from the library point of view. Short, however, of installing a machine for weighing borrowers at the entrance and exit of an open shelf library, it was impossible to prevent all losses. Mr. Stanford replied that even that course would not be successful at the Cambridge University Library where there was a restaurant.

Libraries and Sources of Information in Government Departments.

(PRESENTED BY SIR STEPHEN GASELEE, K.C.M.G., C.B.E.,
Librarian of the Foreign Office.)

The presence of government office librarians at previous conferences organised by ASLIB must have suggested to many of those present that sources of information exist in those offices, which, if they were generally available, would frequently shorten the labour of research. This impression tends to be confirmed by a perusal of the introduction to Rye's *Guide to the Libraries of London*, which shows where most of these libraries are and what some of them contain, and in which more libraries are mentioned as restricted to official use than as available to students and researchers. Some information from those responsible for the conduct of these libraries will perhaps therefore be welcomed as indicating their possibilities and limitations from the point of view of non-official enquirers.

It is hardly necessary to refer in much detail to the public collections maintained by the Government, as exemplified in the British Museum Reading Room, the Public Record Office, the Science Museum Library, and the Patent Office Library, with which most librarians are already well acquainted. The libraries to be considered are those which the majority of government institutions have found it convenient to form as centralised depositories for their printed sources of information, combined in some cases with original archives, though it should be mentioned that documents of the latter class are only available to the public previous to a certain date (in most cases to the end of 1885) and are generally transferred to the Public Record Office after a period of preservation in the office of origin. Not every government department finds it necessary to set up a regular library, with an officer in charge; and if it does, the keeping of the collection may be provided for in a number of ways, ranging between the addition of the duty as one subsidiary to those of a comparatively junior officer and the appointment of a librarian ranking as one of the principal officers of the department and having charge of a considerable staff of assistants.

The scope of government libraries is no less diversified than their size and degree of development. There are general libraries, such as those of the two Houses of Parliament, which, while giving particular attention to constitutional subjects, are called upon to minister to the varied interests of legislators in an ever-increasing range of subjects. After these come the great general departments presided over by the Secretaries of State, under which designation the Foreign Office, the Dominions and Colonial Offices, the India Office, and the Home Office are included. These offices deal with a multiplicity of subjects to which it is difficult to assign other than territorial bounds, and even those limits are not sharply defined and do not necessarily limit the libraries, the character of which accordingly approximates to that of general libraries; again with an emphasis on the political, constitutional, and legal aspects, and with some specialisation such, for

example, as that of the Foreign Office on international relations and that of the Dominions and Colonial Office on Colonial legislation. The India Office Library also includes a large collection (one of the best, indeed, in existence) of oriental books and manuscripts.

A third class consists of the more general "functional" departments, of which the defence departments, the Ministries of Health, Labour, Transport, and Agriculture are the most obvious examples, together with the Boards of Trade and of Education; in these departments the libraries are centred on the respective main subjects, but the relations of these to other subjects and the connection of the departments with general governmental activities add a fringe, much of which is the same in several departments, and includes such classes of publications as statutes and statutory orders, law reports, parliamentary proceedings, and publications, and cognate matter.

Yet another class comprises the special libraries of the offices of various bodies of commissioners and analogous organisations. Libraries of this kind are highly specialised and generally very complete within their field, and in some of them it has been found possible to do something in the direction of the higher levels of special librarianship, such as the indexing and abstracting of periodicals. The departments which belong to this category are commonly not directly concerned to any great extent in current parliamentary business, and the class of publications connected with this is therefore less in evidence than in the larger departments.

Finally there are the libraries attached to the scientific and research departments of the government (other than that of the Department of Scientific and Industrial Research itself, which belongs rather to the third class). In these the material preserved and the methods employed are more comparable with those of the libraries principally represented in ASLIB.

A departmental library occupies the position of a part of the general organisation, and as such is frequently dependent upon the rest of the office, in the sense that functions allied to indexing which an independent library would undertake are performed in other parts of the office incidentally to ordinary duties. For this reason such libraries may occasionally appear to have omitted some of the duties they might be expected to perform or may be unable to produce the information expected of them without reference to another part of the office.

So far as access to these libraries by unofficial persons is concerned, it must be borne in mind that the purposes primarily intended to be served by them are those of the departments, and that their arrangement and scope are closely adapted to departmental needs. Use by persons outside the department, where it is possible to permit it, must remain subsidiary to the work and convenience of the staff, and it is in some degree evidence of the efficiency of the library if its resources are in constant use and therefore sometimes not promptly available for callers. The majority of readers will be the office staff, who will require to use the books in their own rooms, and on this account, when the greater part of the contents of the library is of a kind generally accessible outside, it is quite exceptional for any provision to be made for the accommodation and comfort of readers, including the public, such as is normally made by a public or university library. Subject to these qualifications, it may be said that government librarians are prepared

to give any assistance they can to students and research workers who meet with difficulties in the course of their investigations.

The methods of government libraries also exhibit wide divergencies, and the practice in many would perhaps be severely criticised by those whose study of librarianship has been on the professional and academic lines associated with the management of public libraries. Apart, however, from the effects of profound differences from each other and from other libraries in such matters as the limitation and allocation of expenditure, the degree of discretion allowed to the librarians, and the character of the requirements to be met, the kind of administrative economy conditioned by annual estimates is not favourable to the abolition of old and proved methods and the introduction of new ones except on demonstration of the superiority of the latter in all the circumstances, and the evils of a somewhat unscientific system may well be less than those of a laborious and long-drawn-out attempt to reform it, particularly since fundamental matters, including the very existence of the library, may be subject to question when estimates are under consideration.

It has been suggested more than once that the existence of several libraries within a small area, and even of three or four in one building, could be avoided by combining several into one. This suggestion appears attractive at first sight, but becomes less so on examination. The works needed in only one department are best kept in the charge of someone in that department who is able to judge whether they are of use to many officers and should be held centrally or to one officer who may be permitted to retain them. Where works are needed by several departments at the same time, a central library could exercise less control over the number of copies obtained than the present separate libraries; and where one copy will serve the needs of two or more departments, there is nothing to prevent inter-departmental loans, or even transfers. It is, in fact, sometimes difficult to restrain fissiparous tendencies where a department has a strong technical or specialist section. In order to facilitate personal contact between government librarians, an informal association was formed some years ago, and meets three times a year for the exchange of views on matters of common interest. Forty-two librarians receive the communications of the "Circle of State Librarians", as this association is called, of whom several are members of ASLIB.

A number of the libraries represented in the Circle have been invited to supply descriptive notes to follow this general survey, and these are appended. No uniform scheme was suggested for their compilation, and they accordingly vary greatly in range and compression. The resulting variety will perhaps not be displeasing.

NOTE ON THE LIBRARY OF THE HOUSE OF COMMONS.

The House of Commons Library dates from the year 1818, when a Librarian was first appointed to look after the Acts of Parliament, Journals and Records, Sessional Printed Reports and Papers, which had accumulated in quantity under the charge of the Clerk of the Journals, and to make them more readily accessible for the use of Select Committees.

For the better disposition of these volumes a new Library was erected in 1827, and so convenient were the new arrangements found to be that in the following year the sum of £2,000 was voted for the purchase of books. The catalogue of 1830 shows that this sum was expended on a variety of works of History, Antiquities,

Topography, Commerce, Political Economy and Law, together with Books of Reference, Dictionaries and Maps.

By the fire of 1834 the old Palace of Westminster, including the Library, was burnt down. A great proportion of the books was saved by being thrown out into the street, but a valuable collection of Tracts relating to English History was destroyed. The unprinted papers of the House, which had remained in the keeping of the Clerk of the Journals, were all destroyed, with the consequence that the House of Commons has no collection of archives similar to those which have been published by the House of Lords, on the model set by the Historical Manuscripts Commission. The manuscript volumes from which the Journals had been printed were, however, saved and are kept in the present Library.

In the new Houses of Parliament the Library, while obtaining more ample accommodation, continued to preserve the same general character as before, consisting of two main divisions, (1) Parliamentary and Official Publications, and (2) Works of more general interest, such as might assist Members of Parliament in the discharge of their duties.

(1) The former class dates back to the year 1731, but it is only from about the beginning of last century that entire sets of the Parliamentary Papers and Reports of each year have been preserved. From 1801 to the present time this collection of official information is complete and has been carefully indexed. The Accounts and Papers of each session, together with the Parliamentary Debates, Acts of Parliament, Colonial and Dominion Acts and Debates and Reports and Papers, and some analogous documents received in exchange from foreign legislatures, form a regular increment to the contents of the Library, amounting to many volumes in a year.

(2) As regards the more general part of the Library, while the country gentleman was the prevailing type of Member of Parliament the original design expanded into something between a good London club library and a good country house library, including the Greek and Latin Classics, Poetry and Belles-Letters in English and other modern languages, and works on Fine Art, Architecture and Natural History. Professed fiction, controversial divinity, natural science, and mental and moral philosophy have, speaking generally, always been excluded, as have all works of a highly partisan character on other subjects. In later years the multiplication of published books and the diminution of vacant space have enforced on the Library, as on most similar institutions, the necessity of specialising in books connected with the work of the organ of government to which it is attached, and of trusting for information on other subjects to extensive works of reference. The desire of Members of Parliament to adorn their speeches with quotations affords a welcome excuse for adding to the Library such works as may be considered to have taken rank as literature of the finer sort.

The choice of books to be added to the Library rests with the Librarian, subject to the approval of the Speaker, to whom the House has committed the management of its library. Latterly the Speaker has appointed a small unofficial committee of members to assist him with their advice, and in practice the Librarian submits a list of suggested books to this committee and receives suggestions from it. The additions made each year, other than those which are automatic, are chiefly in the departments of History, Biography, Political Memoirs, Political Economy, Statistics, and Law; but standard works in other departments are added also. The leading English reviews and magazines are taken in, and one or two foreign ones. Newspapers are not taken in by the Library (except *The Times*, which is bound and preserved), but are to be found in the Members' Reading Room, in another part of the House.

An author catalogue, with a separate index of subjects, is employed. It was last reprinted in 1910, and annual supplements have been printed since, but neither they nor the catalogue have been published. A card catalogue also exists for the purpose of checking the volumes on the shelves.

A sum of £1,200 a year is allowed for books, binding and stationery, but furniture and salaries of staff are not included in it.

The staff of the Library consists of:—

The Librarian
The Assistant Librarian
Two Clerks
Two Messengers.

The appointment of these officers rests with the Speaker. The full staff is usually present till about 7 p.m., after which one half remains on one night, and the

other half remains on the next night, till the close of the sitting of the House.

The use of the Library is confined to Members and Officers of the House of Commons, but admission is extended by courtesy to Peers, who reciprocate the courtesy in regard to the House of Lords Library, and members of Dominion Parliaments are admitted during hours when the House of Commons is not sitting. Members of the general public are admitted when accompanied by a member of the House, unless the House is sitting, but the use of the Library for the purposes of study by the outside public requires special permission from the Speaker, who will usually accord it if he is satisfied that the required documents or books cannot be found elsewhere.

THE FOREIGN OFFICE LIBRARY.

The Department of the Foreign Office, known as "The Library", undertakes work which would ordinarily be described by a much broader term. Even the Librarian's full title, which is "Librarian and Keeper of the Papers," does not imply all his functions, for his duties include the following:—

- (1) Custody of the printed books and printed official papers.
- (2) Custody of the archives.
- (3) Provision of material and information derived from (1) and (2) and other miscellaneous sources.
- (4) Supervision of the Registry system, and the handling of papers in the Office.
- (5) Supervision of the production of Parliamentary Blue Books, and other printed official papers for publication.

The following extract from Annex 1 to the Appendix to the Fifth Report of the Royal Commission on the Civil Service (Cd.7749) 1914, page 315, gives further information as to the work of the Department.

"'Librarian's Department' is an inadequate and misleading appellation, for, although the Librarian and Keeper of the Papers has under his superintendence a library of books of reference, this collection exists mainly as being incidental or necessary to the execution of the work of his Department.

"The Librarian's Department is concerned with the custody of MS. correspondence, confidential and Cabinet papers, original Treaties, etc.; the preparation of memoranda on current and past political, commercial and other negotiations undertaken by the Foreign Office, and on the interpretation of Treaties and Treaty questions, etc.; précis writing, indexing, the production of precedents, and the supply of general information to other departments of the Office; the compilation of collections of Treaties, etc.; printing of Law Officers' reports; provision and classification of maps; and the conduct of correspondence on various matters with public offices, private persons, and foreign missions in London, and with British Diplomatic and Consular Officers abroad."

The present staff of the Library proper consists of about twenty persons, and there are about thirty (excluding typists and assistants) in the Registry organisation.

The Library does not have a "budget" of its own, but orders necessary books up to a reasonable limit, only obtaining specific Treasury sanction when the price of a single book is over £5.

The most interesting and responsible part of the work of the Department is that described in heading No. 3 above. Any Department of the Office can call at any time upon the Library for a memorandum as to past policy or precedents on any subject connected with foreign politics, and these are worked out from a careful consideration of all the previous official papers on the subject and from the best books dealing with the matter under consideration. The memoranda may vary from half a page (though these do not necessarily imply less labour) to treatises a good many pages long. On an average about one hundred and twenty such memoranda are prepared each year.

The Foreign Office receives, from foreign diplomatic representatives in London and from British representatives abroad, a large number of miscellaneous enquiries as to British practice in administration, law, etc. These are all, if non-political in character, handled by the Librarian, who supplies the answers from materials at his disposal or by consulting the competent Government Department.

The Librarian gives assistance to historical and political students by replying to questions concerning diplomatic history; and by arranging for the conveyance of manuscripts and other rare books from public libraries abroad to be studied in British libraries, and *vice versa*.

The Librarian prepares and swears affidavits for use in courts of law when evidence is required concerning matters within the competence of the Foreign Office ; and he legalises documents and authenticates signatures upon documents for legal use abroad.

It should be stated, with reference to No. 2 above, that the past archives of this Office are only kept in the Foreign Office building for about twenty years, those of older date being sent to the Public Record Office for custody : they still remain, however, under the Librarian's charge so far as consulting them goes ; and some of the older volumes are constantly fetched to the Foreign Office from the Record Office for use.

[I would also now invite reference to the chapter entitled "The Library" in the book, *The Foreign Office*, by Sir John Tilley and myself (London : Putnam, 1933) ; this chapter is by me, and contains a rather fuller account of the functions of the Foreign Office Library than is possible in the above note. STEPHEN GASELEE.]

THE DOMINIONS AND COLONIAL OFFICES' LIBRARY.*

Between sixty and seventy years ago, when the group of buildings now occupied by the Home Office, the Foreign Office, the India Office, the Dominions Office, and the Colonial Office was in process of erection, it was pointed out that several Departments would be in one quadrangle with facilities for centralisation and with inter-communication such as had not previously existed, and that this afforded an opportunity for replacing the library attached to each of these public departments by a central library. The suggestion was not proceeded with, and separate libraries continue to exist. The idea emanated from the Colonial Office, and this may explain why, when the internal arrangements of the new office were settled, the Library was fortunate to be housed in a spacious room of 100ft. by 25ft. by 35ft., consisting of a ground floor of twelve bays, with a gallery.

The main function of the Library is to serve the two Offices of which it forms a part. For this purpose the ground floor is largely occupied by serial publications, Oversea Sessional Papers, Parliamentary Debates, Official Gazettes, and, in the case of the Colonies and Protectorates, by Estimates, Blue Books, and other returns, as a considerable amount of statistical work is undertaken in the Library itself, and the material for its preparation must be conveniently at hand.

There is also a staff under the Registrar of Laws for the assistance of the Legal Advisers. The legal work of the two Offices has grown enormously, especially since the War, and all overseas legislation is indexed and classified, and memoranda are prepared on subjects endless in variety. Incidentally, this section is made considerable use of by the general public.

On the ground floor is also kept the unique collection of maps, some of which date from the sixteenth century. Those especially in request are rare specimens of early cartography of North America. Many of these have been reproduced for American institutions and individuals, who have no such examples at home, and are eager to acquire copies for their own collections. Early maps of Australia are also constantly being consulted by scholars from the Commonwealth. Owing to pressure on space, however, all the maps and atlases, except those which have been issued within the last fifty years, are being transferred to the Public Record Office.

PAMPHLETS AND CURIOS.

Mention should be made of another feature on the ground floor. In the course of many years the Library has been gradually acquiring pamphlets dealing with overseas matters, and these now form a valuable collection. Some, which at the time of their publication might have been regarded as of little consequence, throw an interesting light on their period. They are arranged geographically, and are constantly being added to. Dipping casually into one of these files, say under the head "Natal," one finds denunciations of Bishop Colenso and pleas for Cetewayo.

In addition to its assistance in the current work of the two Offices, the Library receives the custody of various oversea curios which from time to time find their way to Downing Street. The bays are adorned by examples such as spears, war drums, the idol "Warrior Kenga," a native stool, all from West Africa ; a bust of Khama, the famous Chief of the Bamangwato, in Bechuanaland ; a giant anaconda from British Guiana, and other trophies from the territories falling within the sphere of the two Offices.

With the exception of those on legal subjects, which occupy a bay at one end of the ground floor, the printed books fill the whole of the gallery and, notwithstanding its capacity, the question of space constitutes a serious problem. At the date of

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the transfer from the old Colonial Office in 1877, the printed books numbered about 7,000 volumes. Now their number is about 35,000. Not only do those collected in the course of the last fifty years comprise current works acquired from time to time, but there has been a gradual process of collecting old and rare books, with the consequence that it is difficult to consult a second-hand bookseller's catalogue and to find quoted a book of Colonial interest which has not already a place on the shelves. The credit for this result is due to Mr. Atchley, who held the post of Librarian from 1880 to 1915, and throughout that period never missed an opportunity of securing some treasure. It is sometimes a matter for surprise how much a volume, published, say, two hundred years ago, may assist in the current work of the Departments, by resolving some doubtful point or correcting some contemporary impression.

The printed books are arranged in order of acquisition, though want of space compels some modification, owing to the varying size of the volumes—somewhat of a problem where there is no standard. A card-index of authors is kept, and the general catalogue contains headings for each Dominion and Colony, and for well-defined subjects such as agriculture, education, medical, mining, railways, etc. The geographical headings are used for works dealing with particular territories in a descriptive, historical, or general sense, and subject headings for particular industries; e.g., a book describing generally the island of Trinidad would be entered under "Trinidad and Tobago: Descriptive," while one dealing with the sugar industry of that Colony would appear, not under the geographical heading, but under the subject heading "Sugar." This system may not be on lines quite orthodox, but one must repeat that the Library exists primarily for departmental use, and that its catalogue must be arranged accordingly. Yet the public who use the Library are unanimous in agreeing that they have no difficulty in finding their way through the catalogue, and the Library staff is of course always ready to assist readers.

As far as its everyday work allows, the Library is open for research to accredited visitors, especially oversea scholars, who are welcome to make use of the material available; but books may not be taken out on loan. The accommodation of the Library is limited, and, not infrequently, it is difficult to find room for visitors. But in spite of this drawback, the Library is able to prove a fruitful field for scholars who are engaged quietly and systematically in preparing for future generations the story of the Empire.

INDIA OFFICE LIBRARY.

The Library, as distinct from the Record Department of the India Office (of which a separate account is supplied) is divided into two sections.

A.—The European section comprises printed books originally written in European languages, and manuscripts in European languages, relating to India and to the adjacent countries so far as connected culturally or historically with India, and to Islamic culture and history.

B.—The Oriental section comprises printed books and lithographs, written in those Oriental languages which have in the past been the medium of Indian culture, in modern Indian languages, and in Persian and Arabic, together with their translations into any language, and manuscripts and xylographs of works in the Oriental languages referred to. Printed books number about 200,000 and manuscripts about 15,000.

Catalogues have been published or are being published of all books and manuscripts in both sections of the Library. The printed catalogues are supplemented by card catalogues of later accessions. Details of the catalogues are given in the section "India Office Library" of the annual *India Office List*.

Books and manuscripts preserved in the Library, and official publications and records preserved in the Record Department may be consulted in the Reading Room. Manuscripts preserved in the Library are lent to libraries in all countries. Books may be borrowed from the Library by individual readers up to a limit of five works for a period of three months. The number of works lent and the period of loan may be extended with the consent of the Librarian.

The use of the Library is restricted to:—

- (a) members of the establishment of the India Office,
- (b) persons named in the India Office List,
- (c) gazetted officers of the Indian Army or of the British Army in India, and
- (d) such other persons as have previously obtained tickets for the purpose.

Tickets may be granted on the recommendation of a person of recognised position, and are valid for one year.

The Record Department of the India Office comprises :—

- (a) The records of the East India Company, 1600–1858.
- (b) The records of the Secretary of State for India in Council and of governments in India, from 1858.
- (c) Registers of baptisms, marriages, burials, and wills of Europeans in the Indies. The earliest are those of Madras (1698).

Information regarding (a) and (c) is contained in *A Guide to the India Office Records*, 1600–1858 (printed for the India Office, 1919. On sale at the Office of the High Commissioner for India, India House, Aldwych, London, W.C.2). The volumes dealt with in this handbook are estimated to number about 48,000.

Access to such of the India Office records as are not regarded as still confidential is readily granted for the purposes of historical research on the recommendation of a person of recognised position, subject to the condition that copies of any notes or extracts made are submitted to the Superintendent of Records, and that they may not be published without the permission of the Secretary of State for India. Applications should be addressed to the Superintendent of Records.

THE HOME OFFICE LIBRARY.

The Home Office Library is not open to the general public and is limited to departmental use except in a few instances where members of the public obtain permission from the competent authority to consult books which are known, or likely, to be in the Home Office.

Apart from a few galleried rooms in which clerical staffs are accommodated and two or three basement storage rooms the books are mainly housed in the rooms of the higher Administrative Officers, each Division of the Office retaining books relating to its own particular subjects.

Books are at present card catalogued under author, title and subject (an adaptation of the Dewey system) before being shelved or sent to the appropriate Division for use. The Library is about to be entirely re-catalogued.

By reason of the antiquity of the office of Secretary of State, the Home Office Library contains a number of historical books dating from the fifteenth and sixteenth centuries.

Stocks of loose Parliamentary Bills and Papers and other Government reports, debates, etc., are kept by the Library, the staff of which also collects, indexes and binds selected non-Parliamentary papers each year and the Northern Ireland Government reports and papers every few years.

Rebinding is arranged for up to an annual limit. The books are vacuum cleaned from time to time by the Office Keeper's staff.

There is no "General Intelligence" Division in the Home Office Library as is the case, in some other Government Libraries, but a large number of enquiries come to the Library not only from the Home Office Staff, but from other Government Departments.

In common with other Civil Service Departments all books, papers and periodicals are supplied through the Stationery Office.

THE AIR MINISTRY LIBRARY.

CONTROL.

The control of the Air Ministry Library is vested in a standing Committee on which each member of the Air Council is represented and of which the Chairman is one of the Principal Assistant Secretaries of the Air Ministry.

BOOKS.

There are approximately 14,000 books in the Air Ministry Library classified into twenty-nine sections. The Committee have aimed at making the Library as fully representative as possible of the literature of aeronautics, on the historical and technical sides, and in its bearings upon the activities of modern life.

THE USE OF THE LIBRARY.

The Library is maintained primarily for use by members of the Air Ministry staff. Books are, however, lent to other Government Departments. The Library is not open to the public.

THE LIBRARY OF THE MINISTRY OF AGRICULTURE AND FISHERIES.

The Library of the Ministry of Agriculture and Fisheries contains approximately 30,000 volumes relating to all branches of agriculture. In addition to English publications, many Reports, Bulletins, Monographs, etc., published by Agricultural Departments, Research Institutes, Experiment Stations, Schools and Colleges in the British Empire and foreign countries, are obtained, and the Library is therefore in possession of up-to-date information on all work being done in connection with agricultural science throughout the world. Approximately 1,000 English, Colonial and Foreign periodicals are filed, selected contents of the more important being indexed.

The Catalogue is in card index form based on the Brussels International Decimal System. A selected classified list of modern books filed in the Library has been issued in the Ministry's Bulletin series. Lists of additions and selected contents of current periodicals are published from time to time in the Ministry's monthly Journal.

The Library contains a valuable collection of early agricultural works, such as the annual reports of the "old" Board of Agriculture, the works of Arthur Young, John Sinclair, etc. A chronological list of these early works was published in the year 1930.

Another item of special interest is the Cowan Memorial Library of books on Beekeeping. This unique collection was made by the late Dr. Thomas William Cowan, the founder of the British Beekeepers' Association. It comprises over 1,800 volumes consisting of literature devoted to bees and allied interests, and includes many early works of antiquarian interest, which are included in the list of early works mentioned above. This Library was purchased by the British Beekeepers' Association and presented to the Ministry as a memorial to Dr. Cowan.

The Library is primarily maintained for the use of the officers of the Department, but it is open to the public and books are lent under certain conditions. This concession was introduced in the year 1908 to enable farmers, agricultural students and other interested persons to consult works otherwise unavailable to them. Considerable use of this concession is made, over 1,150 volumes being lent during the year 1934. The Library receives many visitors, and deals with a large number of enquiries by letter.

THE LIBRARY OF THE MINISTRY OF HEALTH.

The Library of the Ministry of Health is housed in the Ministry's main building in Whitehall, London, S.W.1. It includes the collections of the Ministry's predecessors, the Poor Law Board, 1848, the Local Government Board, 1871, and the National Health Insurance Commission, 1911, as well as accretions from the Board of Education, Home Office and Privy Council relating to work taken over from them.

This Library comprises more than 100,000 volumes dealing with subjects in which the Ministry is interested. The range of these subjects is very wide, comprising the blind, hospitals, house production and slum clearance, infectious and other diseases, local and central administration and finance, maternity and child welfare, mental disorders, national health insurance, old age pensions, poor law, the purity of food, sanitation, town planning, water supply, etc., etc. Generally it may be said that the Library contains a complete record of publications on these subjects for more than a century.

The books, of which comparatively few are foreign, include technical works such as books on the medical aspects of the above subjects, as well as works of an administrative or general nature. They are divisible into official and non-official publications; the former predominate and include the Ministry's own publications and those of any other Government Department of interest to the Ministry. Numbered among them may be mentioned the statutes, which go back to Magna Carta, the statutory rules and orders, Parliamentary bills and debates, about 34,000 ordinance maps, and a complete set of Parliamentary papers.

The non-official books, which include many periodicals and reference books, comprise all books bearing on the Ministry's work, which are added as soon as published.

Whilst the Library is kept up to date it contains many old publications, chiefly of interest for purposes of record and comparison. Among these may be mentioned a collection of pamphlets on the relief of the poor dating from the seventeenth century and including some by Dean Swift; also a Record Office, 1783, reproduction of Domesday Book.

The Library is primarily for the use of the Ministry's staff. It is essential for their daily work and they use it freely. The public are allowed access to the Library, and private individuals occasionally pursue important researches therein.

As regards the indexing and arrangement of the books, speaking generally, the Stationery Office published indexes are relied on for the official publications, which are arranged in convenient proximity, whilst for the non-official publications there is a card index of authors' names, titles and subjects, the publications being arranged on the shelves according to Brown's classification.

THE BOARD OF TRADE LIBRARY.

The printed catalogue prepared in 1866 shows that the Board of Trade Library of that period attempted to provide an adequate selection of the contemporary literature on the subjects with which the Board was required to deal. Not many years afterwards, however, it had been decided that a comprehensive library was not needed by the Board of Trade, and the dispersal of the books was avoided only by the intervention of the then Librarian of the Foreign Office, who found space for them for a number of years. From that time until the close of the war, the officer designated the " Librarian and Clerk in Charge of Parliamentary Papers " in the Board of Trade was in fact largely occupied with duties which had little connection with his titular functions, and the library comprised chiefly parliamentary and official papers and a residuum of books acquired for the use of the various Departments of the Board, but no longer required to be kept in those Departments. Large classes of publications, notably statistics from overseas, were received by and kept in the Departments concerned, and the Library had no official knowledge of them. In these circumstances, little systematic cataloguing was undertaken, and the memory of the Librarian was the main guide to the Library.

The " old " Library housed at the Foreign Office was returned to the Board about the end of last century, but remained locked up in the original bookcases in a separate building, and was consequently scarcely more accessible there than when out of the Board's possession. When the Board's offices were removed in 1920, however, it became necessary to use the old cases for more current matter, and the loss of the original arrangement made it desirable that the whole of the Library's resources should be consolidated. Advantage was taken of the fundamental disturbance of established practices to arrange that the Library should be responsible for the supply of all publications required by the Board, and should be enabled to keep trace of all books in the office and thus make them available to the whole of the staff. Some attempt was made to keep in touch with the voluminous output of works on subjects of interest to the Board ; but owing to repeated calls for the reduction of Government expenditure, it was not possible to acquire more than a comparatively small proportion of them.

The rooms occupied by the current part of the Library have this year been reconstructed and refurnished, and there is now an opportunity of further improving the arrangement. When the necessary movement has been completed and some progress made with the rebinding and other work which has fallen into arrear during times of reduction of expenditure, it is hoped that the Library will be able to meet the demands made upon it much more efficiently.

The principal purpose of the Board of Trade Library being the provision of the publications required by the Board's staff in the performance of their duties, its current books are frequently in use with the officers of the Board. For this reason, it is sometimes difficult without notice to provide callers with the information they require where current works other than official publications or ordinary reference works are concerned, but no objection is raised to the use of its resources, so far as they consist of published matter, by enquirers from outside the Board. The accommodation for callers is strictly limited, and this circumstance makes it impossible to extend a general invitation to the public to use it.

It is perhaps difficult to point to any class of publication in which the Board of Trade Library can show greater resources than the libraries generally accessible. The comparative continuity of the parliamentary and official publications side enables it to produce copies of many reports and other documents now not easily found elsewhere, and its period of greater comprehensiveness in the early nineteenth century has left it with a legacy of works of which some are rare and have on occasion proved very useful to research workers. Among these may be mentioned a very considerable number of pamphlets on the questions actively debated at that period such as the Corn Laws and Bank Restriction ; and numerous works descriptive of overseas countries, especially those in which the Committee for Trade and Plantations had been interested.

DEPARTMENT OF OVERSEAS TRADE.

The Library of the Department of Overseas Trade, 35, Old Queen Street, London, S.W.1, is a reference library for the use of the officers of that Department in connection with its work in the promotion and development of United Kingdom trade overseas. It originated in the Commercial Intelligence Branch of the Board of Trade, out of which the present Department of Overseas Trade was formed during the autumn of 1917, as a joint Department under the Foreign Office and the Board of Trade.

The accessions to date number over 50,000 and include all kinds of publications bearing on commerce and industry throughout the world. Not all of these 50,000 accessions are, however, filed in the Library. It is the duty of the Library to circulate all newly-acquired publications to the respective Sections of the Department dealing with the particular subject under review, and a number are retained by these Sections. This applies particularly to works such as United Kingdom and Overseas trade directories and Empire and Foreign trade returns and reports. In addition to United Kingdom publications such as the Annual Statement of Trade of the United Kingdom; the Department of Overseas Trade Economic Reports; Reports of Royal Commissions and Committees appointed to investigate conditions in various industries and trade generally; annual reports of Chambers of Commerce and Trade Directories, a considerable number of Empire and Foreign Government publications are received. These cover such subjects as trade, shipping and financial statistics, agriculture, railways, mining, legislation dealing with customs duties and regulations; the Year Books of the Dominions and the Blue Books of the Colonies.

All publications are filed in accordance with their catalogue classification. The classification scheme comprises three main sections: (a) headings for well-defined subjects such as shipping, agricultural production, mining production, customs laws and regulations, statistical returns, banking and finance, etc.; (b) subject headings for particular commodities, and (c) geographical headings, a separate one for each territory. Thus a publication on a definite commodity such as coal, sugar, etc., would be classified under the respective commodity heading, regardless of the country with which the books deals; while a work on mining production in a particular country would be classified under the country to which it related, e.g. an Annual Report of the Department of Mines of New South Wales for the year 1933 would be classified as "New South Wales; Mining and Quarrying," and a Handbook of Kenya Colony would be entered under "Kenya Colony; Descriptive works." This system works quite satisfactorily, having regard to the organisation of the Department which this Library serves.

In addition to the printed books received, there is a regular receipt of over 900 periodicals. These include United Kingdom Trade papers, Empire and Foreign newspapers and Government gazettes. These are also circulated to the interested Sections of the Department and, after perusal, are filed in the Library. As a general rule, the United Kingdom trade papers are kept on file for one year, Foreign Government gazettes for seven years and Empire Government gazettes for three years.

As already stated, this Library is limited to departmental use and any enquiries received in the Department from other Government Departments, firms, etc., are sent to the Section of the Department dealing with the subject or country to which the enquiries relate. Even so, the Library is frequently consulted by other Departments, such as the Board of Trade and the Imperial Economic Committee.

THE BOARD OF EDUCATION LIBRARY AND THE OFFICE OF SPECIAL INQUIRIES AND REPORTS.

The Board of Education Reference Library was started in the year 1896, when a collection of educational books which had been kept in the South Kensington Museum was moved to Whitehall and placed in charge of the Director of the newly-created Office of Special Inquiries and Reports. Since that time the Library has always been attached to the Office of Special Inquiries and Reports. This Office, which was established in 1894, serves as an "Intelligence Department" to the Board, and, within limitations imposed by the size of its staff, as an "educational information centre" to the world at large. It acts as the Board's foreign and overseas correspondent, and is thus responsible, under instructions from the Board, for correspondence and negotiations (in some cases through the intermediary of the Foreign Office, Dominions Office or Colonial Office) with foreign governments,

international organisations, the League of Nations, and with other parts of the British Empire.

Foreign visitors and visitors from other parts of the Empire who possess the necessary credentials are furnished by the Office with information, advice and letters of introduction to assist them with their inquiries into the methods, organisation and administration of education in this country; and similar assistance is given to British students of education travelling abroad. The Office also undertakes the preparation of memoranda on educational subjects for the use of the Board of Education and for other government departments, and it is responsible for editing and publishing, as "Educational Pamphlets," the results of special investigations made by, or on behalf of, the Board.

Although the Board of Education Library is a departmental library intended in the first instance for the use of the Board and its officers, it has always been open to the public for reference purposes. No tickets of admission are necessary, but readers are required to sign their names in a visitors' book on arrival. The Library is open to the public on week-days from 10 to 5, except on Saturdays, when the hours are from 10 to 1. Students from training colleges, writers on education, educational research workers, and foreign teachers and students of education are amongst the most frequent visitors to the Library. During the last few years there has been a very large increase in the number of these visitors, i.e. from about 500 in 1926 to over 2,200 in 1934. This number included visitors from many parts of the British Empire, Austria, China, Egypt, Germany, Holland, Japan, Norway, Poland, Sweden, and the United States, as well as from all parts of Great Britain. In addition to visitors from outside the Office, constant requests for information are made to the Library by the different branches of the Board in connection with their current administrative work.

The books are arranged on a decimal system of subject classification which was adapted by Mr. Twentyman, the Board's first Librarian, from various well-known systems of decimal classification.

The main divisions of the Library classification scheme are as follows:—

- A. General Works (including encyclopædias, histories of education, dictionaries, series, magazines, annual reports, biographies, etc.). This section also includes an interesting collection of bound volumes of pamphlets and miscellaneous magazine articles.
- B. Fundamental Sciences (including Psychology, Psychological tests and Sociology).
- C. Educational Theories.
- D. Organisation and Administration of Education. (This is the largest section of the Library and contains books and official publications dealing with the organisation of Education in all parts of the world.)
- E. Educational Buildings.
- F. Special Method in teaching the different subjects of the curriculum.
- G. School Hygiene and Physical Education.

In addition to these there is a small section containing text-books, but no attempt has ever been made to form a representative collection of such books.

The books are arranged on open shelves to which the readers have access. There is an author catalogue on cards and a card subject index to the books and magazine articles. The Library contains upwards of 76,000 books and pamphlets. In addition to these about 200 educational periodicals published in this country and abroad are received regularly and are available for readers. A considerable proportion of these are bound up at the end of each year.

The Library has never had a printed catalogue, but three subject lists have been issued at different times. In 1913 the first two of these were published, one on School Hygiene and Physical Education and the other on School Buildings and Equipment. In 1928 the third of these bibliographies was published and dealt with Psychological Tests.

This year a collection of books on physical training has been presented to the Library by the Board's former staff inspector of Physical Training, Captain Grenfell, D.S.O., R.N., and a catalogue of this collection has just been published. This catalogue as well as the three subject lists referred to above are all on sale and can be obtained from H.M. Stationery Office.

About 2,000 books and pamphlets are added to the Library each year. Of these, roughly one-third are obtained by purchase, while the majority of the remainder are presented by other Government Departments or by Dominion, Colonial or foreign governments, or by educational institutions at home or abroad.

An account of the Board of Education Library was contained in the Report of the Board of Education for the School Year 1925-26 (Cmd. 2866: London, H.M.S.O., 1927).

THE LIBRARY OF THE IMPERIAL INSTITUTE.

The Library of the Imperial Institute, although available for consultation by the general public, is primarily concerned with meeting the needs of the scientific and technical staff of the Institute. The work carried out at the Institute relates to the utilisation of the raw materials of the Empire—plant, animal and mineral. Investigations of the products are made in the laboratories, enquiries of all kinds relating to raw materials, manufacturing processes, etc., are dealt with by the intelligence officers and the resources of the Empire are displayed in the Public Exhibition Galleries. To meet the needs of the staff in these directions, the Library has been developed essentially from the technical and scientific point of view, and is particularly strong in publications relating to tropical agriculture, forestry, mining, economic geology and chemical technology. In addition publications of a more general nature relating to the countries of the Empire are well represented.

The funds available for the purchase of books and periodicals have always been very limited, but the Institute is fortunate in receiving gratis publications issued by many of the home and colonial governments, whilst a large number of periodicals are received in exchange for the *Bulletin of the Imperial Institute*. Books sent for review in the *Bulletin* are also placed in the Library.

The Library contains some 60,000 volumes and pamphlets, exclusive of periodicals, of which over 800 are regularly received. Although concerned mainly with the Empire, foreign works are well represented, and include the chief technical periodicals of the United States, European countries and their colonies. The Library is naturally very strong in the publications of the Dominion, Colonial and Indian Governments, including in most cases complete sets of their agricultural and mining journals, bulletins, etc., as well as long runs of the annual reports of the technical departments, trade returns and other publications relating to raw materials. The books in the main are arranged on a geographical basis, with a special section for technical works of a general nature.

The indexing of the periodicals and other publications is a task of considerable magnitude and is performed by special staffs attached to the Intelligence Departments of the Institute. The total number of copies of journals circulated by the Library for the purpose of indexing during the past twelve months amounted to over 11,000.

Visitors having problems relating to the Empire and its resources to solve are welcomed to the Library, where they will receive every possible assistance from the scientific and technical staff.

GENERAL REGISTER OFFICE, SOMERSET HOUSE, W.C.2.

The Library, which is of a specialised character to meet the requirements of the department, contains principally official reports and periodicals on vital statistics and census of population issued by the Dominions, Colonies, foreign countries, and great cities of the world. These volumes are received under a system of exchange which exists between this office and the authorities concerned, and extends also to leading international and non-government statistical societies. Works of demographical and statistical interest are purchased. The official reports are arranged, by year-sequence, under country, and an index of special subjects has been begun recently.

The Department, which was established by the Births and Deaths Registration Act, 1836, began to function in July, 1837. The Annual Reports of the Registrar-General for England and Wales (from 1921 title altered to Statistical Review) date from that year, those from the 1st (published in 1839) to the 42nd being the work of that great pioneer of Vital Statistics—Dr. William Farr. Publication of the Series of Weekly and Quarterly Returns of Births and Deaths, and the decennial supplements to the annual reports was begun shortly afterwards.

As stated above, the Library is primarily for the use of the department and as a general rule the books cannot be lent, but members of the public can always have access to them upon calling at the office by appointment.

FORESTRY COMMISSION LIBRARY.

The Forestry Commission Library (9, Savile Row, London) is primarily intended for the use of the Department's officers and is not open to the public. Occasionally, however, books are loaned to persons who make enquiries on specific matters relating to forestry.

The Library is not an extensive one. It contains only some 900 volumes, and in addition there is a collection of forestry periodicals and publications received from time to time from Forest Services in exchange for the Department's publications. The literature is of a specialised nature, dealing with all subjects relative to forestry.

No elaborate system has been adopted for the classification of the books. The Library index comprises six sections under the following headings :—

- (1) General Forestry and Silviculture.
- (2) Botany (including Ecology).
- (3) Forest Protection.
- (4) Utilisation (including Wood Technology and Engineering).
- (5) Management (including Mensuration and Working Plans).
- (6) Economics (including Resources, Law and Policy).

Books are entered in each section alphabetically according to the author's name.

REGISTRY OF FRIENDLY SOCIETIES.

From a general point of view the Library of the Friendly Societies Registry and Office of the Industrial Assurance Commissioner may not contain many books of interest as it consists mainly of legal volumes; but the collection is such as to provoke the envy of many of the solicitors and barristers who attend professionally the arbitrations which form part of the daily routine of the office.

The Law Reports comprise the statutes from 1846, King's Bench and Chancery Division, etc., and in addition there are Halsbury's *Laws of England*, the complete English Reports, Mew's *Digest of English Case Law*, Chitty's *Statutes*, *Encyclopædia of the Laws of Scotland*, *Weekly Notes*, *Law Journal*, *Law Times Reports*, *Times Law Reports*, Justice of the Peace, and Justice of the Peace Reports.

The Library also contains standard legal text books on a large variety of subjects.

Apart from the legal aspect the Library reflects the functions of the office, which are largely concerned with the thrift of the nation.

No reference to the Library would be complete without mentioning the *Guide Book of the Office*, which contains, in a form suitable for laymen, the law and practice relating to Friendly Societies and Branches, Shop Clubs, Cattle Insurance Societies, Benevolent Societies, Working Men's Clubs, Specially Authorised Societies, Workmen's Compensation Schemes, Industrial and Provident Societies, Building Societies, Trade Unions, Superannuation Funds, Widows', Orphans' and Old Age Pension Schemes, Loan Societies, Scientific, Literary and Fine Art Societies, Savings Banks, Savings Bank and War Stock and Bonds Disputes, and Industrial Assurance. References to the statutes and regulations are included throughout, and there is a complete index.

POST OFFICE SAVINGS BANK LIBRARY.

The Post Office Savings Bank Library is not entirely an Official Library.

For Official purposes it attempts to specialise in books dealing with Savings Banks at home and abroad, the General Post Office, Thrift, Banking, Accountancy, Parliamentary Administration, Economics, and Law. It receives and stores periodicals and all literature which may in any way be of assistance in the conduct of Post Office Savings Bank business.

In addition it caters for the general interests of the Staff. To this end it keeps books dealing with Gardening, House and Home, Wireless and Television, Photography, Sport, Science, History, English, League of Nations, Architecture, Maps and Holiday Guides, and literature of every kind except fiction.

The Library is not open to the general public.

ACCOUNTANT GENERAL'S DEPARTMENT : GENERAL POST OFFICE.

This Library is a very small affair comprising some 100 volumes dealing almost entirely with accounting, financial and statistical subjects. Many of the volumes were bequeathed by late officials and are rather out of date, but additions of new works are made from time to time. Such additions are notified to the Staff of the Department by inclusion of the titles in a departmental memorandum which is

circulated quarterly. The facility of borrowing books is at present restricted to the Department's staff, but this may later be widened to include staff in the other Departments of the Post Office.

POST OFFICE ENGINEERING RESEARCH STATION LIBRARY.

The Library, which deals almost wholly with scientific and technical subjects, employs the "open access" system.

1. *Text books.* About 1,800 volumes are held covering such subjects as Mathematics, Physics, Mechanics, Acoustics, Electricity and Magnetism, Chemistry, Electrical, Mechanical and Power Engineering, Electrical Communication (Telegraphy, Telephony, Radio and Television), Chemical Technology, Metallurgy, etc. Historical and foreign sections are included. Constant watch is kept for reviews of new publications and selected lists are periodically submitted to the technical staff for recommendation.
2. *Periodicals and Abstracts.* Ten weekly, thirty-three monthly, thirteen quarterly and three annual publications are taken. Abstracts of items of interest are made and included in a weekly Library Circular, eighty copies of which are issued to various sections of the Post Office Engineering Department and to certain selected bodies, e.g. the Science Library, Science Museum, and the Reichspostzentramt, who reciprocate. The periodicals are held for reference on the tables of the library for a fortnight and are then available for loan. Approximately 1,600 bound volumes of various periodicals are held.
3. A small section of purely standard reference works is held and these are not available for loan.

Indexing. The Universal Decimal Classification is used.

Relations with other Libraries, etc. Frequent requests for loans are made to the Science Library, D.S. & I.R., British Non-Ferrous Research Association, Inst. Elec. Engineers, and H.M. Patent Office. These are usually for periodicals not taken by the Post Office Research Library, and these special demands arise, as a rule, as a result of readers' perusal of Science or Engineering Abstracts. Extensive use in this connection is made of the World List of Scientific Periodicals, which simplifies the task of ascertaining the libraries from which a required item might be borrowed.

Use of Library. A record taken over a period of six weeks recently shows that the average weekly number of users of the Library service was: Readers 60, Loans 45, Enquiries (written and telephoned) 36.

Foreign Publications. Verbatim translations of specified matter are made upon authorised requests.

General. The Library is housed on the second floor of the new Post Office Research Station at Dollis Hill, N.W.2, which was formally opened by the Prime Minister in October, 1933. The book-cases have glass-panelled doors, with cupboards under. The floor is composed of Indian gurjun, and the panelling, book-cases and other woodwork of East Indian bombwe. The general lighting is indirect from lamps placed above the cornice and individual shaded desk standard lamps are provided on the tables.

METEOROLOGICAL OFFICE LIBRARY.

GENERAL.

The Library of the Meteorological Office contains about 25,000 publications and is one of the largest meteorological libraries in the world. The series on its shelves are not strictly confined to meteorology, but include the publications of several leading scientific societies such as the Proceedings of the Royal Society, Comptes Rendus de l'Académie des Sciences, Paris, etc., etc. Many publications are obtained by exchange, many by generous presentation and some by purchase. The publications received by exchange include those of state meteorological services throughout the world as well as those of private institutions. This active exchange has been maintained for many years and thus a vast mass of climatological data is now available in addition to numerous papers containing the results of meteorological researches in many lands.

Although the Library exists primarily for the use of the Meteorological Office staff and thus for the efficiency of their service to the State, it also affords direct service to the general public in various way. It is open for reference purposes on week-days (10 a.m.—4 p.m. Mondays to Fridays; 10 a.m.—12 noon on Saturdays); it lends books to Government departments, universities, etc., and has recently

become associated with the National Central Library as an "outlier" library. It cannot undertake to meet all demands for loans of meteorological works, very few of which are kept in duplicate, but it endeavours to encourage the study of meteorology, not merely by lending books that can be spared for short periods, but also by giving information and advice as to suitable literature, etc.

PROCEDURE.

Apart from an increasing number of text books in many languages, the majority of meteorological literature is published in periodicals. A careful scrutiny is made of such periodicals, books and reprints as they are received and articles of meteorological interest are incorporated in an author index. A classified subject bibliography is similarly prepared each month. These monthly bibliographies form the basis of printed bibliographies published bi-annually by the Royal Meteorological Society in collaboration with the Meteorological Office. The entries in these bibliographies are at present grouped under subject headings such as "Physics of the Atmosphere", "Pressure", etc.

The sub-divisions under each heading are used in the library of the Meteorological Office for the more detailed subject bibliography arranged chronologically since about 1919. Earlier years back to 1900 are covered by the printed International Catalogue of Scientific Literature.

For climatological purposes there is an extensive bibliography of climatological literature, sub-divided geographically.

A few published bibliographies and many papers with numerous references are listed to form a bibliography of bibliographies and there is also a classified collection of abstracts of meteorological papers.

These bibliographies and sets of abstracts may be consulted in the Library.

The Library includes a collection of lantern slides from which selections may be borrowed at a small charge.

RESEARCH DEPARTMENT, WOOLWICH.

The Research Department, Woolwich, is an establishment under the War Office authority, but its function is to carry out research on matters arising in connection with all three Services—the Navy, the Army, and the Air Force.

It consists of five branches (exclusive of the Administrative side), namely, the Proof and Experimental Establishment and the Explosives, Metallurgical, Ballistics and Radiological branches. The Library has consequently to deal with the wide range of subjects embodied in the research carried out in these branches.

The main Library is responsible for ordering and maintenance of the whole of the stock, for loans and for circulation of periodicals to the Staff, and for supplying general information, but each of the branches enumerated above has its own information service, the organisation of which varies according to its size and nature.

The Library contains three to four thousand books, about twelve thousand pamphlets and unbound periodicals, and receives regularly one hundred and sixty periodicals. It has been found expedient to keep the current numbers of all periodicals (with the exception of a few very specialised ones) on view in the Library for one month after receipt. During this month the indexing of the journals is done by the branches concerned and abstracts of important articles are made and circulated on periodical "Literature Lists". The Staff thus have an opportunity of seeing the originals of the abstracts listed while they are still on view in the Library. When the month is up, the periodicals are circulated to those of the staff who require them.

As in all Research Libraries, the current periodical literature is of great importance, and as our annual grant for the purchase of books, etc., is limited, it is necessary to discriminate carefully in selecting purchases. The periodicals which concern the Department can be divided roughly into three groups:—

1. Those which must be seen regularly as soon as possible after publication and be retained for reference.
2. Those which should be seen regularly, but need not be retained.
3. Those which occasionally contain articles of interest, but not so often as to necessitate regular perusal.

The Department subscribes to those in the first group. Those in the second group are either circulated from other Service Libraries or examined regularly at the Patent Office. For the ones in the third group the various abstracts which are

part of the periodicals in the first group are used (e.g. Chemical Abstracts, Metallurgical Abstracts, etc.). When necessary, the originals are borrowed, or, if they are important, copies are obtained for retention.

Full advantage is taken of the special borrowing privileges we are allowed as the library of a Government Department, both for periodicals and for books (the latter being inspected, wherever possible, before purchase).

All books (with the exception of those required for constant reference) are allowed on loan to all of the Staff, with no definite time limit, though books must be returned after a week if called for. The method for recording issues is one which shows both where each publication is, and what publications are held by each borrower. There is also a system of "permanent-loans" by which books required constantly in any branch are kept in that branch, but can be borrowed from it when required.

The Library is at present classified according to an arrangement which has grown with the Department, but it is hoped shortly to adopt one of the accepted schemes.

In general routine, the Library conforms to the usual practice.

DISCUSSION.

The Chair on this occasion was taken by SIR RICHARD GREGORY, who expressed the pleasure of the delegates that SIR STEPHEN GASELEE had been able to come in person to present the resumé of notes on Government Libraries and Information Departments. Sir Stephen in his turn paid tribute to MR. H. D. RICHARDSON who had been largely responsible for the editorial work.

MR. C. E. A. BEDWELL, the Honorary Secretary of the Society of Comparative Legislation, opened the discussion by suggesting that Sir Stephen Gaselee's paper had a bearing upon the recommendations of Lord Atkin's Committee on Legal Education. From the information supplied by him it was clear that an increasing number of people desired to have knowledge of the laws of different parts of the Empire, as well as foreign countries. Mr. Bedwell said that he had been in favour many years ago of a combined library, but had long since appreciated that the combined catalogue, suggested by Lord Atkin's Committee, was the only feasible proposal. In fact, it seemed to be doubtful whether even that might now be possible, in view of the increasing amount of material. It might be necessary to take one library catalogue, for example, for the laws of the Empire, the Library of the Royal Empire Society, and supplement that with entries from other libraries containing books available there. There was, however, no corresponding library containing foreign law. He asked, therefore, whether the Foreign Office would be able to entertain the idea of their library catalogue forming the basis of the catalogue desired by Lord Atkin's Committee? He referred to the fact that the Society of Comparative Legislation had always aimed to give information about the working of the laws, as well as the texts.

In his reply Sir Stephen Gaselee said that it would be possible for the Foreign Office Library Catalogue to be available, as suggested, but the Foreign Office have not, as a general rule, attempted to do more than obtain the texts of laws by interchange with other countries.

PROFESSOR R. S. HUTTON referred to the difficulty of finding adequate representation of British Empire and Colonial books and other literature in libraries in this country and enquired if anyone had organised a systematic bibliographical search.

MR. D. H. VARLEY (British Empire Society) agreed that it was sometimes difficult to keep track of books published in the Overseas Empire. His own library relied on the generosity of the various governments concerned for official publications and selected other books through agents overseas. They had in mind, however, the compilation of a comprehensive current list of overseas publications of all kinds, co-ordinated at one centre of record and research. This was not, however, an immediately practicable proposition.

MR. A. VAN DE PUT said that it was almost impossible to get to know of Australian publications and that they were difficult to obtain. He quoted the case of a standard two-volume work published in Sydney in 1934, at about forty shillings. When, after several enquiries, contact was established with the publisher's agent in London, the work was not in stock and owing to the limited demand for Australian literature here and, no doubt, the conditions of publishing there, this seemed to be accepted as inevitable. In any case, the time taken to procure the work much exceeded what was necessary for the dispatch of an order and the transit of the work to England.

MR. H. F. ALEXANDER, in response to a question by Professor Hutton, outlined the methods in use at the Bodleian for obtaining information of books published

(Continued on p. 102)

The Preservation of Business Records.

By A. V. JUDGES.

Hon. Secretary, Council for the Preservation of Business Archives.

You will, I hope, indulge me if I open my remarks with a simple assertion. It may suggest that I am not arguing, but telling you. Still it assumes, what we have clearly the right to assume on this occasion, that the subject of this evening's address possesses sufficient interest to bring a group of pundits together. If, then, we accept the statement that to the economic historian of the present day, whatever his school, the records created in the course of action by the performers in the past are of as great, if not greater, importance than the records compiled by observers, we need not stop to ask *why* business archives should be preserved, but proceed to deal with questions about *how* they are to be preserved.

First, a few preliminary observations. Generally speaking, business archives run to bulk. Again, generally speaking, they are in need of cleaning, classification and, in some cases, boxing, before they can be handled with comfort and precision. I say nothing about binding and repairs, for this introduces a question of expense which should only arise in exceptional cases, as when, for instance, a MS. possesses rarity from the collector's point of view.

These considerations inevitably introduce the question of selection. It is dangerous to destroy when in ignorance of the needs of future generations of scholars, but better to destroy a proportion than to lose all. This point I want to return to presently.

Business archives, then, are apt to be voluminous, dirty, untidy and somewhat troublesome to preserve in an ordered fashion. At the present time the problem of preservation, however, is much more than an archivist's or librarian's problem. One is less concerned with the manner of preservation than with the chances of preservation at all. No law exists to compel the owners of old ledgers, bills and commercial correspondence to submit their treasures for inspection before sending to have them turned over to the refuse destructor, the pulping machine and the manufacturer of toy drums. Few private owners are even now aware that the old boxes of papers in the attic may have anything more than a family interest; not all the firms and corporations of ancient standing are willing to take much trouble with inquirers who want to know about those cash books and bills of lading that are believed to have been taken, nobody quite knows where, before So-and-so's father retired from the concern. In times of economic uncertainty like the present the dangers of loss and destruction are magnified. The liquidation of businesses is put into the hands of people who ignore all but the most recent documents. In most cases of involuntary liquidation not a thought is given to the early records, if there are any such, in the office or works or at the solicitors'. A business merger offers just the opportunity of clearance long sought by the manager who has been worried by the space taken up by a collection of ancient books and papers which nobody has ever been known to

consult and of whose existence no person outside the business may ever have heard. At the present time, if one may generalise from many known instances, something like that which journalists call a holocaust appears to be in progress in the older industrial areas where rationalisation in its many forms is altering the face and structure of business enterprise. You will realise that this is a disturbing thought for students whose work may, for example, be concerned with the industrial and commercial history of the West Riding of Yorkshire.

It was partly in order to meet this situation—with special reference to the need for inquiry into the location of records outside public institutions—that the Council for the Preservation of Business Archives was founded last year. Previously none of the many record societies and similar organisations had shown much enthusiasm over business documents. Witness the offhand treatment of accounts and commercial correspondence by the Historical Manuscripts Commission until a few years ago. There was a call for some new line of approach.

Of course the general indifference was not unbroken by exceptions. A collection of Boulton and Watt material relating to eighteenth-century engineering at Birmingham and elsewhere was made available in a well-known public library, and it has had great importance for research. The Public Record Office in Chancery Lane has made accessible to scholars a large mass of economic documents, bearing upon trading corporations, public utilities and colonial ventures, documents which somehow or other had become embedded in the official archives. To these collections many historical workers have gone in search of matter, notably Professor W. R. Scott, when he was engaged in making his monumental history of joint-stock organisation. More recent investigations have often been set on foot as the result of the chance discovery of pockets of documents, some of them in the most unlikely places. The story of George Unwin's finding of the Oldknow cotton-trade records, among which a party of boy scouts were playing in a ruined stable at Mellor, is well known. The book which followed has illuminated some dark corners in a critical period of transition during the Industrial Revolution. It was also by chance, I believe, that Miss Lucy Sutherland found at a country house the Braund MSS. which she put to such good use in her study of the eighteenth-century bullion trade and insurance market. A month or two ago the minute books of the first two industrial joint-stock corporations to be founded in England (in the reign of Elizabeth) were turned up in the offices of some South Wales brass manufacturers. These are now in the British Museum.

The need for some kind of organisation to co-ordinate and stimulate inquiries and to register discoveries had been discussed for some years by those interested in the uses of business records in the writing of history. In 1934 the Council came into being. It was not inappropriate that it should have as its President the Master of the Rolls, the custodian of the National Archives in London, and as its Treasurer a partner in a banking house whose ledgers reach back in a continuous series to the age of Charles II. Let me summarise the main lines of policy as at present conceived.

(A) Propaganda on behalf of the principle of record preservation. The proprietors of old businesses still surviving must be encouraged

to respect their early books and letters as something in the nature of a social trust. Our Council has been trying various channels for getting into touch with the owners—articles and letters in the London and provincial press, notes in the trade journals, inquiries through Chambers of Commerce, lectures to rotary clubs, personal letters to the heads of firms, and so on. As a first step a request has been sent out for particulars of all business documents more than one hundred years old. I cannot say that success during the short period of the Council's existence has been anything but moderate, for, whilst a number of large business houses and manufacturers of repute have responded readily, the great mass of small concerns in the provinces has as yet hardly been reached.

(B) The registration of information obtained. As a rule the particulars come in on a four-page folder which takes the form of a *questionnaire*. If we can get this reasonably well completed, it forms the substantive document in the Register; and this is the normal procedure. In some cases the particulars on the folder may be amplified by a special report. The folder tells the leading facts about the collection covered, indicating the proper course to be followed in approaching the owner for research facilities, and any safeguards he may desire to impose. In course of construction is a central reference system consisting of summary card indexes arranged according to names, trades and localities. This will facilitate reference as the Register grows. Regional centres will keep local registers; but at present the scheme of regional work is chiefly on paper, and it may be some while before many regional committees are in operation.

(C) An advisory service. The Council puts forward no claim to be able to teach their jobs to librarians and the keepers of record offices—rather, it can benefit by *their* suggestions. But it can, and does, give assistance to private owners. Some wish to discover what their documents are, some to be rid of them if a repository can be found, some to receive a few elementary hints about preservation and safe-keeping. In some cases the Council will offer to secure the services of an archivist (or at any rate a skilled person) who will go in for a few days or weeks and list a collection. It will endeavour to find temporary loan accommodation at a public institution when the owner, whilst unwilling to part with the MSS., cannot make them available to an inquirer on his own premises. As regards students, the Council will place the resources of the Register at the applicant's disposal and will undertake the necessary introductions (with a word as to *bona fides*) to those in possession of any documents he may wish to inspect. It will also set on foot inquiries if the researcher comes with useful suggestions.

(D) Storage arrangements. There is no present intention of setting up yet another special collection, such as is being constructed at the Baker Library in Boston by the Business Historical Society of America. In America geographical circumstances are different from those of this country, where everything is nice and compact. The Council is not a willing collector, and so far it has accepted custody of no documents at all, since it wishes to be regarded as a go-between rather than a dump. By preference the records discovered are either left with their owners or deposited in a publicly recognised archive institution. Collections are to be left intact, and disturbed only in so far as it is

necessary to make them usable and maintain them in good condition. Collections will be left to remain as far as possible in the locality of their provenance. If they are clearly national in their scope the Council's policy is to have them deposited either in one of the larger universities or in a reasonably accessible public library.

So far, experience has shown that one of the principal difficulties is going to be that of space, a problem which we have tried to evade in the first place by concentrating upon collections relating to dealings before the 1840's. But this sets up an arbitrary classification which no one would wish to observe too strictly when trying to operate the scheme. When, for instance, you explore an almost complete run of office and workshop records covering the activities of a Shropshire colliery and iron-founding combination extending from 1770 to 1870, you realise that it would be an act of madness to break the collection up on a time basis and give preferential treatment to a part only. Nevertheless, such a collection, unsorted, damaged by water and decay, may weigh several tons and fill a large room. To ensure preservation you *may* have to eliminate portions. A rough rule, adaptable to particular requirements, is this. Nothing more than one hundred years old should generally speaking be burnt, not necessarily because age gives added importance to any document, but because business documents of nearly all types seem to get scarcer with the square of the distance in time. For later periods the *complete* records surviving for certain "sample" years at regular intervals, together perhaps with those for some "special" years as well, should be retained intact, so that every aspect of a business organisation may be investigated and reconstructed. Correspondence should nearly always be preserved; so too should certain classes of account books. On the other hand old legal documents relating to real property titles and the like are of little importance for the purposes of economists and historians, and they may sometimes be conveniently disregarded after scrutiny. All this is assuming of course that some things must be jettisoned.

This paper has rather emphasised the importance one is disposed at present to attach to rescue work outside the institutional *milieu*, since I believe that many of what we might call the "after-care" problems must suggest their own solutions as they come along. Lest there be misunderstanding let me say two things in conclusion. First, the Council's final object is to make accessible the greatest possible range of documentary material under the easiest conditions. Its successful realisation must accordingly involve a policy of harmonious co-operation with county and city librarians and record societies, together with those in charge of special information bureaux; and perhaps I should add, a policy of close attention to regional and particular interests.

Secondly, the Council has set out to claim no monopoly in the sphere of its operations. So long as the aims of its promoters are realised, the means employed can be what you will. Nearly everyone connected with library and intelligence work could, if he became interested, assist these aims in one way or another. Special studies of the documentary source material for the history of separate trades are always to be welcomed; so too is the creation of any aid to research, in MS. or print, concerning itself with the economic past of a village, town or county. If any person who finds himself in touch with any

specialised body of lore—and I imagine everybody here must be so situated—comes into contact with *records*, whether technological, commercial, financial, or carrying social significance, connected with past developments within that special province, our Council will be grateful to receive his suggestions and advice.*

* The executive business of the Council is in the hands of a small Committee whose Chairman is Mr. G. N. Clark, Chichele Professor of Economic History at Oxford University. Correspondence should be addressed to the Hon. Secretary, Council for the Preservation of Business Archives, c/o The Institute of Historical Research, Malet Street, London, W.C.1.

DISCUSSION.

PROFESSOR J. H. CLAPHAM (in the Chair) said that as an economic historian he welcomed the work of the Council for the Preservation of Business Archives. He knew only too well how difficult it was to get material for the early history of industry and he had come across instances of valuable records being lost or destroyed in recent years. He had seen an account book of a woolcomber in Yorkshire from 1760 to 1780, which gave much interesting information on the state of the industry at that time, such as wage rates, the gradual coming in of bank notes, etc., but this book had since been lost.

The discussion on the paper was opened by DR. G. PRATT INSH, who said he would like to comment briefly on two points. The first of these was the extraordinary difficulty often experienced in getting hold of MSS. material relating even to large and important commercial movements. Take, for example, the problem of tracing the history of the tobacco trade in eighteenth century Scotland. For half a century this trade played an important part in promoting the national welfare. With the outbreak of the American revolution all the elaborate financial connections built up between the Glasgow merchants and the Plantations ceased to function. Of the commercial enterprise of the Tobacco Lairds few traces had been discovered in Scotland, but much MSS. material dealing with the American branches had been gathered into the Library of Congress at Washington. Scottish students who were trying to trace the economic history of eighteenth century Scotland had perforce to visit Washington on account of the value of these manuscripts. The second point that he wished to emphasise was the need for the realisation of the importance of such material by the custodian to whose care they were entrusted.

MR. C. S. ORWIN said that though his interests were agricultural rather than industrial, he was deeply interested in the work of the C.P.B.A., and he would like to ask how far the Council concerned itself with the preservation of records of agricultural history. In recent years, owing to the break-up and sale of many old landed estates, he knew that many documents of priceless value to historians of the land, which had been kept in old estate offices for centuries, had been lost or destroyed. MR. JUDGES replied that the Council was fully alive to the necessity for preserving the materials of agricultural history. There was some hope of dealing with earlier land records now that the Master of the Rolls had asked for the deposit with him of manorial court rolls, etc.

PROFESSOR R. S. HUTTON read a letter from Mr. Arthur Westwood, of the Assay Office of Birmingham, which described how he had found in the Boulton and Watt Collection a tightly folded paper, which proved to be James Watt's instructions for the assembling of his engine. Professor Hutton suggested that, in order to promote a spirit of helpful emulation amongst possessors of business records exhibitions of other collections might be held in selected localities.

MR. A. B. BLAKE said that a study of old business records showed that many things generally believed to be modern developments, e.g. a costing and time studies, were well known 100 years ago. He thought that the interest of students in the teaching of history could often be stimulated by using biographies of professional men.

MR. JOHN McADAM instanced the finding of the original papers relating to the foundation of Parr's Bank, now the Westminster Bank, amongst the papers of an old estate.

MR. B. M. HEADICAR asked whether the C.P.B.A. were concerned with the preservation of Church records, and quoted an instance of a parish in which the Vicar was Chairman of the Library Committee, but when a search for old parish

(Continued on p. 102)

Reference Books and how to make the best use of them.

By B. M. HEADICAR, F.L.A.
London School of Economics and Political Science.

I propose to talk about many books of a reference character which are not particularly well-known and only incidentally to mention points about some of those works which are familiar to everybody. It is not my purpose to give a select list of the most-used works of reference, but this will not suggest they are not worthy of consideration. It would obviously be impossible, and not even interesting, to rattle off a list of titles with most of which you would be familiar.

First of all, what is the definition of a reference book? In my young days in a public library, all books weighing more than, say, nine pounds, or measuring more than thirteen inches in height, were poked into the reference department, irrespective of type or contents. The usually accepted definition of a reference work nowadays is one that requires to be consulted, but not read through. Broadly speaking, such a definition may suffice for library purposes, although it is difficult to draw the line in many cases.

In any event, librarians should be thoroughly acquainted with the scope and contents of the works to be consulted in their libraries. The title pages of many books frequently do not give anything like a complete guide to the matter within their covers. Many informative paragraphs or tables, not usually known to the reader, are contained in the various volumes. Many people are quite unaware of the librarian's knowledge of these points, which must be something more than superficial or partial if every book is to do its maximum service.

The *Almanack de Gotha* is a similar work to our *Statesman's Year Book*, but it gives greater detail of reigning houses, governments, etc. Few people are aware that in it will be found a full statement regarding payment of members of Parliament in all countries and the amounts thereof: a very handy and convenient source of information on that subject. Most of you, I presume, are aware that *Whitaker's Almanack* is always published in two editions—the leather-backed one containing about one-third more pages than the paper-covered edition—but the same index is given in each. The *World Almanack* is a similar publication to Whitaker, but, naturally, gives much greater detail about the United States. A less familiar work is *Europa*, first published in 1927 and supplemented in different forms since then. It is a valuable work on trade and economic conditions in the whole continent, with a specially useful survey of the coal situation, electrical progress, the continental steel agreement, oil, rubber (including "The Stevenson" scheme in operation) and figures of the consumption per head of tea, coffee, cocoa, sugar, and tobacco, comparing the latest year with 1913. In addition, there is a "Who's Who," geographically arranged, in which the chief people in politics, trade, literature, art, music, etc., in each country, are conveniently tabulated, while statistics of population, females per hundred males, birth rates, and death rates, help to make up an exceedingly useful handbook.

The *Annual Register* will be known to most of you as a summary history of the year and it has been regularly issued since 1758 but there is one particular snag in connection with this publication which requires careful watching. For several years in its early period, there were two different publications with the same title and each issued a comprehensive index to its first thirty or forty years in one volume. I believe a number of libraries have found that their index volume does not agree with their set and I have even heard it rumoured that the British Museum only discovered some years ago that its own run did not fit the index volume. However, the point is, that if you acquire this valuable annual in its complete form, make sure that the particular index volume is really the one your set requires.

I have been out of touch with reference books since I undertook to give this talk and I have been entirely dependent on my memory for the notes I have before me, so if I am not as exact as you would like, I must ask your indulgence.

Another much-used publication is *Who's Who*, which I will not comment upon, except to point out that it is probably the most convenient volume to show membership of royal commissions and parliamentary committees, without having to turn up a number of official publications for the purpose. Perhaps it may be useful to some of you to know that there is no reason to retain a complete file of the work since its issue in 1897. If you possess *Who was Who* (1897-1915 and 1916-1928), you have a complete record of all the biographies which have appeared in *Who's Who* up to 1928 and only the volumes issued since are required in addition. Shelf room is too valuable to miss such opportunities of discarding. Remember, that *Who's Who* refers only to living persons, while the *Dictionary of National Biography* is concerned only with British persons no longer alive. Ignorance of this fact was responsible for great indignation on the part of a well-known professor who could not find Mark Twain mentioned in it.

Similar publications of which you should know the existence are *Who's Who in America* (biennial), *Qui êtes-vous ?* (Living French people), published irregularly, as is also *Wie is dat* (Living Dutch persons). The corresponding German work—*Wer ist's*—is issued every four years. Pseudonymous names of writers will be found in *Who's Who in Literature* (annual), while the *Author's and Writer's Who's Who*, first published in 1934, has a valuable register of writers on specialist subjects. *Keesing's Archives* is also a most useful work—in fact the only one of its kind. I do not suggest that the precis given of the articles quoted will serve everybody's purpose, but the index, which is brought up to date each week, is a valuable feature of the work. Each quotation in the text gives you a reference number to the previous quotation on the same topic, and by this means it is easy to trace back an event to its beginning without having to refer each time to the index, which indicates only the latest reference. The serious research student will not be content with the precis given perhaps, but he will find the source of it clearly stated and he will, naturally, frequently want the original article before being satisfied. The work does, however, act as a guide to public opinion in the various countries of the world on present-day problems and events and, in my own experience, has saved a vast amount of individual hunting up in all directions. That is its greatest value.

As a break from this mere listing of books, let us turn for a moment to the theory of reference book selection. It does not necessarily follow that because a work is a large and expensive one that it is therefore authoritative and worth purchasing. Before doing so, examine and test likely points for worthiness. Even the best books fall down at some point and must be used with judgment. However accurate and complete a work may be, it is not worth buying unless a library has a particular use for it. It is as great a mistake to buy more books than are needed as it is to have too few books to meet the needs. Comprehensive annuals may meet all the requirements of some libraries, while the very specialist readers may find that only the fullest possible details are of any value to them. The library which buys the latter when the simple forms will serve its purposes, is just as blameworthy as the library, which for reasons of "economy" tries to make the simpler forms do when only the full details are required, or—an even worse fault—procures both kinds. No sensible librarian will be persuaded to purchase the complete *Oxford Dictionary* if the concise edition will serve his purpose, neither will he obtain *Webster* if he finds, or his clients find, the divided page irksome and trying. In the upper part of the page the main words of the language are given and in the lower part, in smaller type, the minor words, foreign phrases, and abbreviations. In many instances, on the contrary, this plan may be of the very greatest convenience. It is also useful if you argue that "lieutenant" should be pronounced "lootenant." Webster gives you this choice.

While on this subject of dictionaries, let me commend to you two very useful works by J. O. Kettridge. The *French-English and English-French Dictionary of Technical Terms and Phrases in Civil, Mechanical, Electrical, and Mining Engineering and allied sciences and industries* (Routledge: 50s.), and the *Dictionary of Financial and Business Terms* (Routledge: 10s. 6d.) have filled long existing blanks and will be found of much value in departments which cannot afford the many-volumed works in several languages.

Again, such things as directories are usually plentiful in reference libraries, but great care is needed in the use one makes of them. There is the directory which depends on payment for its entries and is often incomplete, not always to the knowledge of the user, and the directory with its entries printed in various types, which frequently mislead the consultant. It is not always the firm whose name and goods are printed in the largest type which is consequently the biggest or best. It is surprising how great is the psychological effect of large type, even if it is only the Telephone Directory which is before the reader. It is not unsound to argue that many firms appearing in small type have no need to wish to be prominent in the text when their fairness and ability are proverbial.

Most of you have heard of Kelly's *Directory of Merchants, Manufacturers, and Shippers of the World*, but not everyone is aware of the amount and character of the information given in the work. It is not only a geographical directory of all places, large and small, carrying on an export trade, but such details as population, roads, railways, and other transport available, port accommodation, etc., will be found. It is an indispensable work in all commercial libraries. I ought to mention here the various *Pilots* issued by the United Kingdom and the

United States naval authorities. They are really guides to navigation but the information given about the various ports of the world is unique in them. Every possible detail likely to be of service to shipping is to be found in these volumes—size of the harbour, depth of water, number of wharves and cranes available, stocks of coal which may be drawn upon, as well as full particulars of all accessible transport and the chief commodities dealt in. These volumes are nothing like so much used as they deserve to be, mainly, I suppose, because “North Sea Pilot” on a title-page does not suggest very much as to the nature of the contents. There are, of course, directories and year books for all the chief industries and commodities, and I have found the little handbook, *Business information obtainable at the Commercial Reference Library* (Liverpool Public Libraries), a very complete and exceedingly well-arranged guide to the subject.

With regard to atlases, it is most important that the librarian should thoroughly understand the meanings of colourings, contour lines, and the particular features each sheet is intended to bring out prominently. This applies to all maps. I have known people to mistake colourings showing rainfall as territorial markings. Also do not conclude that every map in an atlas is drawn to the same scale and make sure from examination that post-war dates on the title-pages do not cover pre-war boundaries. In particular, readers anxious about transport should make a point of consulting the annual consular reports in various countries for the latest information on railways. New lines are constructed, others go out of use, and atlases and maps frequently err in connection with these facts. A number of maps I know place the railway station at Lake Baikal in Siberia on the wrong side of the lake. If this were only as big as the Serpentine it would not matter much, but as it is almost forty miles wide at the point where the railway reaches it, a calculation of distance to be covered between stations might easily be a long way out.

Dates of encyclopaedic works are of the utmost importance. There should be a penalty for all omissions of the correct date of the information within the covers. A reprint with a new date on the title-page and no change in the contents is even more misleading than a work without a date of publication. It is conceivable that the latter might be suspect, but the dated one may easily be a trap for the uninitiated.

An instance of the kind of thing I have in mind occurred with a certain encyclopaedic work on the British Empire issued some years ago, and re-issued with a fanfare of trumpeting ten years or so afterwards with a corresponding change in the date on the title-page. By checking figures of population, exports, etc., I was able to discover that not a letter of the contents differed from the earlier issue. A test of this character or a hunt for information about recent events will generally enable you to date any work of this nature.

Coming to bibliographical works in particular, remember that the *Reference Catalogue of Current Literature* (last issue 1932) is a collection of publishers' catalogues of books in print at that time, with an alphabetical index of authors and titles in a separate volume. I understand that future issues of this work will consist of the index volume only, certainly the most-used part of this very convenient publication. Bear in mind that some publishers do not send their catalogues for inclusion and that it is dangerous to conclude that a certain wanted

work is out of print, unless you know the actual publisher of it is listed in this catalogue. I have found Whitaker's *Cumulative Book List* saves a good deal of time if you are interested only in special subjects. There the books are classified with an alphabetical index of authors and titles, while in the *English Catalogue* (the annual cumulation of the *Publishers' Circular*) the books are entered under authors and titles (or rather, subject-titles) in one alphabet. The *United States Catalogue* is similar in function to the *Reference Catalogue* but the entries are given in dictionary form—authors, titles, and subjects in one alphabet. It is kept up to date by the *Cumulative Book Index*, monthly, and cumulative five times a year. It now includes English and Canadian books also—a great advantage to users. An equivalent French work is *La Librairie française*, books on sale at the 1st January, 1930, with supplement to 1934. The *Bibliographie de la France* is a weekly record of French publications in classified form with an author index. It is cumulative monthly and yearly, and has at times some valuable annotations. The *Deutsche Nationalbibliographie* is a weekly record, from 1931, of German publications, in classified form, with a cumulative author index. For earlier years one must refer to the *Halbsjahrverzeichnis*, which I have often found very confusing to anyone who, like myself, has very little knowledge of the German language. For Italian literature there is the *Annuario bibliographico Italiano di diritto, economia e politica*, first issued in 1928.

A good many indexes to periodical literature will be known to you, but I would like to mention the *Public Affairs Information Service Bulletin*. This indexes about 900 periodicals and other publications in the English language. It is an annual American work, first issued in 1915. It has a weekly supplement, cumulative about every two months. Entries are given under subjects with plenty of cross-references. It is mainly concerned with economic and social affairs, with analytical entries and frequent annotations. There is no author index. It includes many books as well as periodicals not in other guides, such as Chamber of Commerce journals, official publications, bank bulletins, and the like, many of which are most valuable and yet get no mention in the lists of publications noticed above. It is an invaluable guide to current information on individual countries and commodities. The Library Association's *Subject Index to Periodicals* is the only thing of its kind published in this country. It is an annual publication with entries under subjects, but also without an author index. It is undoubtedly an ably prepared index, but will lack full support until it is issued at more frequent intervals. Possibly the greatest advantage of periodical literature is its up-to-dateness compared with books, and a work which does not appear until some of its entries are at least eighteen months old is bound to suffer in its circulation. It is in this direction that the *International Index to Periodicals* excels. It is issued monthly, is cumulative quarterly, and includes about 250 periodicals in which certain important foreign journals and a number in English not indexed in other guides find a place. It takes the place of the *Reader's Guide* first issued about 30 years ago. It is an American publication, in dictionary form. A very valuable guide for those interested in sociology and applied economics is the *Bibliographie der Sozialwissenschaften*, an international guide to books and about 1,500 periodicals, the former being starred to save time in selection. It is a select list

and in that sense a great time-saver, because only what is considered to be authoritative is included. One of the greatest bibliographical feats of recent years was the issue of the *Bibliographie general des sciences juridiques, politiques, economiques et sociales*, 1800-1926, with annual supplements since. Although not indexing periodicals in detail, it does include off-prints of articles separately issued, and is a guide to all publications in the French language from whatever country they emanated.

In regard to government publications, probably the most-used type of reference books, it is impossible to speak fully in the limited time available, but a few hints will, I hope, be found worth while. Most countries, but not all, issue annual statistical abstracts which, in many cases, are a great deal more—nothing less than a history of the country and its inhabitants in figures. Careful use is necessary. Many readers will require something more than the summaries given here, and librarians must be careful to note the more detailed works from which these summaries are compiled, usually clearly indicated. Frequently it will be found that figures of the exports from one country in a given year do not agree with those given in the publications of the importing country. It is necessary to be aware of this. There may be various reasons, such as difference in categories of classification or methods of determination. Frequently it happens that goods exported from one country in December do not reach the importing country until January and will appear in the 1934 figures of the first-named and in the 1935 figures of the latter. Note also that the translation of weights and measures as given in some official publications is merely approximate. For instance, a “doppelzentner” has often been given in our statistical abstracts as “2 cwts.” whereas in reality it represents 220.4lbs. This does not matter for a general approximation, but if you are concerned with millions of hundredweights the position is different. Make frequent use of the *Guide to Official Statistics* issued annually by the Stationery Office. It will save you a great deal of time, but read very carefully the introduction so as to understand the method of indexing and arrangement. For instance, you might look under France, and find no entry at all, concluding nothing had been issued by this country concerning France, although you feel sure that you had seen or heard of one. It was probably one of the annual reports of the Department of Overseas Trade, and these reports are entered under the name of the issuing department and not that of the country dealt with. The statistical work of our government departments is described in Chapter VII of *Further factors in industrial and commercial efficiency* (commonly known as the “Balfour” report) 1928. By the way, I have known scores of readers to look in the *Index to Parliamentary Papers* under Balfour for this work. Like so many more referred to by similar nick-names, which are not to be found in the titles of the works at all, it will not be located under that word, and I would recommend any of you who have been troubled on this account to refer to a list of 179 different reports, which was published in the *Bulletin of the British Library of Political Science* in 1934 and was reprinted in a *Reader's Guide to the British Library of Political and Economic Science*, 1934, price sixpence. This, which was prepared under the direction of Dr. Dickinson, my successor at the London School of Economics, is a most useful handbook for many, although they may not actually be readers at the School.

The United States official publications are carefully explained in Schmeckebier's *The Statistical work of the U.S. Government*, published in 1925. No other country beside the United Kingdom and the United States issues regular lists of its publications. The U.S. Lists are much more informative than our own, as they frequently give detailed annotations of the more important publications. In making use of the census volumes of the various countries, be careful to note variations in the arrangement of the tabular matter and group headings. It is perhaps of interest to note that the census unit in this country has always been the civil parish and in the United States it is the federal registration district. Watch particularly the areas involved. The ecclesiastical parish in England does not necessarily coincide with the local government district, and neither perhaps with the parliamentary district. Our first census was taken as late as 1801, and therefore figures representing earlier dates must be largely estimated and are dangerous for purposes of comparison without warning of this fact. In particular one needs to look out for traps after the foundation of the Irish Free State as separate from Northern Ireland, and this fact will specially mislead unless you are aware of it when trade figures are being used. It is also interesting to notice that the U.S. does not publish marriage rates and death rates in the same volume. The latter have always been issued separately, presumably for ethical reasons. Do not overlook the important introductory chapters issued in Volume I of the Census of India, which give a very admirable ethnological summary and valuable statements relating to caste and religions.

The *Monthly accounts relating to trade and navigation* issued here on the 14th of each month, are subject to corrections, which are always necessary, of course, in the annual volumes published during the summer. Note especially that the unrevised figures for the calendar year are given in the January issue of the monthly returns and not the December part.

A volume particularly to be recommended because of its comprehensive form and convenient tabulation and analysis, is the *United States Commerce Year Book*, first published in 1923, and now appearing in two volumes, the first of which is concerned with American production and finance, and the second giving similar statistics for the rest of the world. In regard to convenience of arrangement, etc., it is superior to our own *Statistical Abstract for Foreign Countries*. A comparison of the current volume of the latter with its first issue in 1877 is very suggestive.

The annual report of the U.S. Director of the Mint is the only official publication which gives full details as to the production, distribution, and consumption of the precious metals, as well as the trade in, and the prices of gold and silver. In 1931 the United States issued a *Report on Distribution* in three volumes—retail distribution in large towns and states, wholesale establishments, special trade reports on distribution of both kinds, showing the comparative effectiveness of various business channels. We have nothing like it in this country. Our own census of production is, of course, only partially complete and it does not attempt anything in detail on the distribution side.

May I also remind you that the *U.S. Federal Reserve Bulletin*—the early issues of which are very difficult to get hold of now—includes a survey of the complete fiscal movements of foreign powers. In this

case also there is no similar publication of our own government. An even newer publication of the U.S. is the *World Economic Review* which, although only in existence for about two years, is already looked upon as a standard reference work on international trade and world production.

The real difference between official and privately issued publications of the character just described is that the former are issued for "service" not "profit," and "new edition" never means "reprint." Dates are not tactfully omitted from the title-pages.

I ought just to mention that the periods covered in the various annual volumes must be carefully noted. The official year does not always cover the same months, while an annual report for 1934 may not actually include the figures for that year.

Some people will on no account believe official figures, others will study nothing else, but, of course, they are the fundamentals in all our calculations. A great deal more of interest about official statistical publications will be found in two articles in the *Library Association Record* for, I think, September and November, 1934, by Mr. Pieper, of the Library of the London School of Economics. I do not want to suggest from my remarks that the U.S. publications are more important than our own. I think on the whole they may be a little less accurate, but they are much more original and alive. The compilers of these reports are generally more expert in their acquaintance with the things they write about. The U.S. government is never slow in sending special enquiry officers to learn and write about new developments in trade and commerce anywhere. They are not content to collect facts from the publications of the country concerned. The *U.S. Commercial Handbook of India* is certainly a better work than anything similar issued by ourselves which I know.

Don't forget that the *Statesman's Year Book* is not only useful for its account of the different countries of the world from year to year, but, often unnoticed, the tables giving world production of petroleum, iron and steel, cocoa, gold, cotton, fleets of the world, shipping, League of Nations, and, not the least valuable item, a one-page comparison of metric and British weights and measures, next to the tables based on them. Its bibliographies for the different countries are unequalled for reference purposes, and the "official" and non-official worshippers have each a section to themselves.

I have not time to say much about general encyclopaedias, except to point out how essential it is to read the notes in the index volume of the *Encyclopaedia Britannica*—which might just as aptly be called the "Encyclopaedia Americana"—before use. In any case, tear the volume in half and keep your index and atlas portions separate. It is highly dangerous to attempt to look at the atlas if someone else is consulting the index at the same time when both are in the same cover.

A glance at Bartholomew's *Gazetteer of the British Isles* will show how necessary it is to understand the problems I have attempted to expound. This gazetteer is, of course, an authoritative one. It was published in 1932, the year after our last census was taken.

If you turn up, say, Coventry, the article states that the population is 128,000, but if you examine the introductory material you will find a table giving the populations at the 1931 census, and Coventry there stands on the 167,000 mark.

It all comes back to what I have intended to convey. The librarian or his assistant is not expected to know the answers to the many questions put to him, but he is expected to know the sources where answers may be found. This he can only do fully and accurately as a result of personal acquaintance with books and constant examination of indexes, prefaces, contents tables, points of view. It is an elementary rule to make notes of any surprise finds in a work and keep a permanent file for the benefit of the whole staff. New works in particular should be familiarised and the old ones scanned each year for possible extensions or depletions. Compare articles in one work with those in the same subject in another work—note authority, arrangement, date, whether technical, popular, detailed, or summarised. A subject treated in detail in one work may only be summarised in another, while in another subject the opposite may be the case.

If these surprise packets of many individuals were one day co-ordinated what a complete and perfect work the proposed ASLIB *Business Man's Directory* might be.

DISCUSSION.

The Chair was taken by MR. W. C. BERWICK SAYERS, who mentioned his long acquaintance with Mr. Headicar and his great appreciation of his work in the organisation of the British Library of Political and Economic Science. Contributors to the discussion were MR. H. L. JACKSON, DR. G. PRATT INSH, DR. A. SANDISON, MR. H. H. FARR, and MR. E. ANSELL.

DR. PRATT INSH amplified Mr. Headicar's references to the value of the Admiralty Pilot Books both as reference books and as travel books, and also agreed with him as to the short-comings of certain standard books of reference. The Dictionary of National Biography was one of these, but something was being done to remedy its defects by the publication of emendations in the Bulletin of the University of London Institute of Historical Research.

DR. A. SANDISON remarked on the frequent misunderstanding of the distinction between the Medical Register and the Medical Directory. The Register is the official record of those who are legally qualified to practise, and unless a doctor's name is in that Register he has not got that legal status. The Medical Directory gives much fuller details, which are compiled according to a set form by the doctors themselves, but has not the legal standing as a record of qualification to practise which the Register possesses. Another point of interest is that for the recording in the Register of higher degrees, after qualification, e.g. M.D., additional fees are required, whereas no charge at all is made for any entry in the Medical Directory. Thus entries in the Register usually contain the qualifying degrees only.

What Industry expects of the Public Library.

By R. BRIGHTMAN, M.Sc.(Lond.), F.I.C.

Despite the growing burden which the increase in scientific literature throws upon all who wish to use it, whether in science or industry, comparatively little success has yet attended any efforts which have been made at co-operation in dealing with this mass of literature even in regard to abstracting. Since even this important matter has scarcely attracted the attention of industry in general it is not surprising that the possibilities of co-operation with the public library services have remained largely unexplored. It is probably true that over a large section of industry even to-day the chief expectation of the public library services is that it should remain as low a charge as possible upon the local rates. Attention was, however, called to the services which the public library might render to industry and research in a paper by Mr. J. P. Lamb, the chief librarian of Sheffield, at the ASLIB Conference at Oxford in September, 1932, and Sheffield, as is now well known to members of ASLIB, provides a remarkable example of what is possible in this sphere. Before discussing, however, the directions in which the public library might be of service to industry, it is as well to consider some of the reasons which have prevented industry making use of existing services, and the factors which are essential to efficient use of those services or to further co-operation between industry and the public library.

Probably the chief reason for the neglect of the public library by industry is the comparative dearth until recent years of technical libraries within industry itself. Even to-day it will probably be found that the majority of firms in this country are without a technical library relating to their own field or even the nucleus of a library service. Where such service does exist it will be found that in most cases that it has developed from a more or less adequate collection of books and journals assembled to meet the requirements of an analytical or research staff. It is only slowly that the eyes of the industrialist are being opened to the possibilities for service which are supplied by the maintenance of a library or information service in the special field of industry with which he is concerned. Until the education of the industrialist progresses to at least this point it is scarcely to be expected that he will realise or utilise the possibilities of co-operation with services maintained by libraries outside his own special sphere of interest. Once, however, an adequate library and information service has been developed within the bounds of a firm or an industry, the task of dealing effectively with the immense mass of published information enforces the consideration of co-operation with other organisations engaged in similar services. It is almost impossible for any single organisation, however efficient, to deal with all the questions, technical, scientific and commercial, which may arise without duplicating an immense amount of effort expended elsewhere. The realisation of this fact was an important factor leading to the foundation of ASLIB itself. It was, however, interesting to discover

in *Canadian Chemistry and Metallurgy* for May of this year the following statement :

"A time comes when it may profit a company to expend considerable money on the type of service given by a real reference library." This is one of the rare instances I have been able to find in the literature indicating a recognition of the possibilities afforded by co-operation with external reference libraries or information bureaux. Undoubtedly, however, as the use of the special library within industry proceeds, the possibility, indeed the necessity, of co-operation with other libraries will be increasingly recognised if the growth of scientific and technical literature continues at its present rate.

The existence, however, of such a library in the industry unit may be regarded as an essential condition for co-operation to be established with a public library or efficient use made with the services so provided. Unless there is in the firm a librarian or recognised person to whom the handling of such matters is entrusted, confusion and duplication of effort are certain to result. Duplicated requests will be made from different departments of the firm for a paper or a book which is already in the possession of the firm and the appointment of a librarian or other liaison officer for this purpose is an essential preliminary if only as a mere act of courtesy to the public library service which it is supposed to utilise. Moreover, the efficiency of a library service depends fundamentally upon the ability of the user to state his requirements lucidly and in adequate time. There are few things more wasteful of time and effort than requests made at the last possible moment under conditions which put a high premium on mistakes. An important consequence which should follow from the appointment of a librarian or other person as liaison officer is the education of the staff inside the company in the use of a library, particularly in regard to the procedure for making requests and for return of documents borrowed.

The services which the public library can render to industry have been so adequately delineated by Mr. Lamb that it is difficult to break fresh ground, and several of the points to which I call attention will therefore hardly be new to ASLIB. In the first place, there are few libraries, whether in industry or not, which are not frequently in doubt as to whether sufficient use will be made of a particular work to justify its being placed on their shelves. Particularly does this apply to books dealing with questions which are not of regular interest to a firm or which are of general interest to many others, such as those relating to questions of management, industrial safety, transport, economics, plant and equipment, on which publications to-day are almost legion. There will be many books which it would be well worth while to have available at some central point in a locality since they would receive from firms collectively a use which would amply justify their purchase, even if it would not have justified the purchase of the book by one or more individuals. It is evident, however, that there are many books of this type where the purchase of copies by half-a-dozen or more different firms in a locality brings in little more return than could have been secured by ensuring the availability of one or more copies of that volume at some agreed central point such as a public library. Apart from anything else, the question of finance emphasises the importance of this point, and if industrial libraries

were able to budget for their own requirements, taking into account the services available in a central public library in that district, their task would be much simpler.

It should of course be realised that quite apart from the public library or any university library or technical college library which may be available in the district, the industrial librarian will usually have access to a large number of special libraries maintained by professional or scientific associations related to the science on which his industry is based. As examples may be mentioned the libraries of the Chemical Society, the Institution of Civil Engineers, the Royal Statistical Society, all of which may be used by virtue of personal membership either of the librarian himself or of one or other of his colleagues. Frequently use may be made of the Science Library in London, but here efforts will usually be made to obtain the publication locally first. The position in London is so fundamentally different from that in the provinces in view of the numerous special libraries available on the spot that it is being dealt with in a special paper by Miss E. W. Parker, and I do not propose accordingly to discuss it further here.

Not only is there already much duplication of expensive and specialised books by public, university and special libraries in cases where easy and rapid book exchange is quite possible, but many books which would be of service are not available because of the restrictions applied by limited funds. Where an efficient service of book interchange could be organised through the public library, it should be possible to spend to much greater advantage the sums available whether in the special industrial libraries or in the universities and public libraries themselves. The question of prevention of overlapping in the provision of books is one which well deserves close study in each area where the possibility of effectual book interchange exists. Apart from the various possibilities in regard to financial co-operation, the regular interchange of information regarding the additions made to the various industrial libraries of a district and the public libraries should be of service.

Closely related to this question is the matter of reference books. Even to-day there appears to exist in industry a widespread ignorance as to the extent to which standard reference books, even such elementary aids as codes and directories, are available in a commercial library, and the tendency to demand the purchase by an industrial library of a volume to which reference may only be made once or twice in the course of a year is not an uncommon event. Its wastefulness needs no emphasis on my part. The true policy is found in ensuring that all reference works which are only infrequently consulted by any one firm are available at the appropriate spot in the commercial library of the district, and to spend on extending and making complete that range the monies which might otherwise be spent, possibly in duplicate, by individual firms, on books which did not receive a use which justified them occupying space.

A further matter in which co-operation would be a great service to industry is that of the compilation of local union lists of periodicals available on the lines of the world list of scientific periodicals. Although a wide range of scientific and technical journals may be available in a particular district only a small proportion of them will

appear in the world list and none of those available in industrial libraries. A union list such as I have indicated would frequently avoid the necessity of sending to a distant library for a copy of a periodical which could be easily obtained by application to a neighbouring firm, or library within a few hundred yards. The machinery for compiling and maintaining the list of periodicals taken by individual firms, technical colleges and libraries in a particular area could often easily be provided by a simple card index at the public library, and the maintenance of the joint list should prove to be of ever-growing advantage to all firms in the area.

A further possibility in regard to co-operation is presented in the storage of periodicals. The storage of scientific periodicals which are in frequent use is a comparatively simple problem. Every works librarian must, however, be faced with awkward decisions regarding the storage of volumes and periodicals of which only infrequent use is made. Only rarely can the space and expense of storing such journals on his own shelves when bound volumes of the same periodicals are available in the public library and possibly in a dozen other different firms within a few miles be justified. It would be sufficient for most purposes if one or more sets of the periodical were available for loan purposes for a whole district at some central place in the public library. Here again certain conditions in regard to complete sets and freedom from mutilation would rightly be laid down by the public library and which would presuppose a certain amount of control and education within the firm or industry concerned in regard to the care and custody of periodicals.

The information services which the public library are able to render are also frequently unknown to industry, and however efficient an information service is maintained by an individual firm, it is rare indeed that at some time or other during a year the public library would not be able to render real service if approached, even if only in directing an enquiry to the source of the information required. At the same time certain types of information required by the industrialist are hardly available in public libraries at present. For example, while the industrialist generally has little difficulty in obtaining the technical information he requires particularly in his own special field, either by his own literature searches or by getting in touch with first-hand authorities, often the information required is not purely technical but rather ordinary commercial information bearing upon technical matters. As examples there is the extent of the market for a new type of product or the scale of manufacture of a competitor, and the public library is rarely able to supply such information. This is not so much the fault of the library as a condition inherent in the present competitive structure of industry. A demand from all libraries for more complete industrial statistics of all kinds would probably assist the industrialist in getting trade associations, government departments and similar organisations to improve the statistics publicly available without disclosing legitimate private information.

This matter of information services raises a fundamental question as to the scope of library service. It is possible to overstress the importance of the supply of books. The average book is out of date at the time it is published, and for up-to-date information one must usually rely upon the periodical literature so far as published informa-

tion is concerned. The demand for information in a more fluid form is probably likely to increase. Examples of such information services are already to be found. Moody's Economist Service to Industry is merely concerned with purely financial and commercial matters, but a service half-way between the A. D. Little Service in the United States, which is almost purely technical, and Moody's Economist Service is the type of thing which the manufacturing section of industry is likely to be requiring in the future as part of the service rendered to industry by public libraries. The question of finance need be no stumbling block if the service is of the right type. Moody's Economist Service is self-supporting because industrialists are prepared to pay for the services they receive. It is of course a question how far even in that event the public library could develop service of this kind for industry, and it is equally possible that as the need for such services becomes more acute they may be developed inside the larger industries themselves.

Possibly one first step towards the development of such service for the public library would be the systematic collection of trade catalogues and circulars issued by firms describing their products and their uses. The co-operation of the manufacturer with the public library in this way would probably greatly increase the efficiency of the information service which the public library is able to supply even under present conditions.

There are of course many other ways in which co-operation between public libraries and the industrial library might be extended. The provision of photostats such as that available at the Manchester Central Library is frequently much appreciated and often affords considerable saving of time. Even the files of patent specifications available in the major reference and technical libraries are largely unknown to and neglected by industry, even to the extent of the opportunity afforded of ordering specifications for their own files by examination of the specifications and not merely by title. I question whether the excellent system of cuttings maintained for example by the Central Library in Manchester is utilised by industrialists to anything like the extent it deserves, and I am sure that the establishment of closer contact with industry would enable the efficiency of the cutting service and its utility to industry to be increased considerably.

The growing mass of publications in such languages as Russian, Japanese or Chinese raises the question whether in many areas it would not be worth while arranging for the translation of such literature on a co-operative basis. Comparatively few firms require sufficient translations from Russian, Japanese or Chinese, for example, to justify the engagement of a whole-time translator to cover these languages, but it might be found, however, that demands for such translations over a whole district would fully justify the appointment of such a person. There are, of course, special difficulties in regard to technical knowledge which will be familiar to ASLIB from its experience with the panel of expert translators, but it would appear worth while considering also the organisation of such a panel on a geographical basis in addition to its present lines. The technical or commercial library in a large industrial area may provide one of the easiest means of elaborating such a system of co-operation.

Effective co-operation in such ways as these does, however, depend, as I have already said, on the existence of at least the nucleus of a library service or information bureau within an individual firm or industry. It depends also upon the care with which the needs of the industry or information bureau are defined. Much again depends upon the type of staff employed in the public library, and this point deserves further consideration. There is undoubtedly a tendency for the industrialist to regard the public librarian as possessing an academic outlook more fitted to the service of his fellows in a university than to the service of those in the outside world of industry and business. However much truth is to be found in this criticism, the building up of a library service for industry and business is beset with much the same difficulties as are encountered in education for industry and the outlook of those responsible for the direction of the service is all important. A technical training is not commercial enough, a purely economic training is not specific enough, and an accountant's training is too narrow. A combination of all three with some experience in the practical conduct of business is probably the ideal. For an executive position in industry or business sufficiently high for the right kind of experience to have been gained the pecuniary rewards are so high compared with those of librarianship that persons of the right type are rarely drafted from industry to librarianship. The interchange of staff in this way, however, demands some consideration if the public library is to acquire that intimate knowledge of industrial requirements upon which efficient service is based. Moreover, close contact between the staff at the public library and that of the industrial library should at least assist in the improvement of library technique within industry itself, while development of library service within industry itself will assist industry to formulate more clearly its own requirements and to indicate to the public libraries the extent to which they can meet these needs. In the meantime the growing output of published matter of every kind, the physical impossibility of any one organisation covering the whole field as well as the limitations imposed in most cases by available funds enforce the importance of exploring to the full the possibilities of co-operation.

What use are Industry and Commerce making of the Public Libraries in the London Area ?

By E. W. PARKER.

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I

The material presented in the following paper makes no pretence to being an exhaustive discussion of the subject: the aim has been rather to give some analysis of existing conditions, with a view to provoking practical discussion which may possibly result in closer co-operation between the Libraries and the users of the material supplied by them.

In considering the relation of the Public Libraries to industry and commerce, it is important to draw certain clear distinctions between the conditions obtaining in London and those prevailing in the provincial city or small town areas.

Firstly, a large number of firms in London and the immediate outskirts are essentially specialist in one or more main branches of industry, and maintain, as part of their working equipment, a library well stocked with the literature of their subject(s). In the case of the majority of their problems involving subjects outside their immediate range, the obvious and most economical solution is communication by telephone, messenger or letter, with one of the easily accessible specialist bureaux of information, or application to one of the scientific or technical societies whose scope is particularly exhaustive on the matter in question.

Further, the Public Libraries in London are differently situated from those in the provincial areas, in that particular industries are not, as a rule, associated closely with any particular borough. Whereas a city like Birmingham or Manchester may provide, with comparative ease, the material required by the main industries of the respective districts, any given London area will probably house a multitude of diverse industrial undertakings, whose needs would require more than the financial or cubic resources of the local Public Library for their adequate satisfaction.

These and other considerations very materially affect the nature of the demands made upon the Public Libraries in the London area, and must to a large extent determine the selection of the literature placed upon their shelves.

II

In order to arrive at some valid estimate of the extent to which industry is at present using the Public Libraries of London, an attempt has been made to obtain a census of opinion from actual and potential users engaged in various representative industries, and resident in various localities.

In an area so large ("London" is here interpreted in the widest sense), it is obviously impossible to approach more than an infinitesimal number of the concerns which make up the industrial whole. The information summarised below, may, however, be regarded as to some extent representative of the experience and views of large and of small firms, and of individuals related in different capacities to various industrial interests.

Enquiries have been made from firms and/or individuals connected with the groups shown in the following list: replies were received from representatives of those marked with an asterisk:—

- * Advertising Agencies.
- * Antique Dealers and Dealers in Objets d'Art.
- * Artificial Plastics Manufacturers.
- Beekeepers.
- * Brewers.
- Broadcasting Stations.
- * Builders.
- * Cablemakers and Cable Communication Agencies.
- * Caterers.
- Cement Manufacturers.
- Ceramic Manufacturers.
- * Chemical Industries (Fine and Heavy Chemicals, including Pharmaceutical Manufacturers).
- * Cinematograph Industry.
- * Confectionery and Preserve Manufacturers.
- * Dairy Industry.
- Distillers.
- * Electrical Apparatus and Equipment Manufacturers.
- Electroplaters.
- * Engineers (Aircraft, Automobile, Electrical, Railway, General, Mechanical and Civil).
- * Enquiry Bureaux (General and Special).
- * Flour Millers.
- * Food-processing and Food-supply Industries (including Canning).
- * Fuel Producers.
- * Gas Industry (Illuminant, Power and Chemical).
- * General Post Office.
- * General Supply Stores.
- * Horticulture and Agriculture.
- * Leather Makers.
- * Libraries (Special).
- Linoleum Manufacturers.
- Match Manufacturers.
- * Metal Industries (Ferrous and Non-ferrous).
- Musical Instrument Makers.
- * Newspapers.
- * Oil Industries.
- Papermakers.
- * Photographic Supplies Manufacturers.
- * Printers and Illuminators.
- * Research Associations and Industrial Research Departments.
- * Rubber Makers.

- * Scientific Instrument Makers.
- * Soap Makers.
- Statistical Agencies.
- Textile Manufacturers.
- * Tobacco Manufacturers.
- Translation Bureaux.
- * Transport Industries.
- Travel Agencies.

Firms and individuals circularised were asked to give general information on their experience in the use of Public Libraries and, with a view to focussing attention on salient points, a questionnaire was supplied, in which the following specific enquiries were made :—

1. *The nature and average annual number of the calls made on the Public Libraries.*

The replies received, and the absence of reply in other cases, lead to the conclusion that strictly limited use is made of the municipal Public Libraries by industry and commerce as such.* Many of the informants refer to the adequacy of their own technical libraries, and a still greater number to the completeness of the information at their service through the medium of the scientific societies, research associations and specialist information bureaux. The proportion of the replies containing appreciative reference to the facilities offered by the Patent Office Library, the Science Library and the British Museum constitute a strong argument for the maintenance and extension of the usefulness of all three libraries, and for the further improvement of their services in respect of speed of supply, open access and training and status of staff.

Almost all calls made by industrial concerns on the Municipal Public Libraries involve works of a general text-book character, the demand being primarily for an authentic, up-to-date and concise statement of present knowledge on a given subject (*vide infra*). The Public Libraries appear to be widely used for consultation of directories, dictionaries and encyclopædia and the comprehensiveness of this type of literature is very generally appreciated.

The following views, expressed by some of the correspondents, indicate what is regarded by the London industrialist as the ideal content of the technical side of Public Libraries :—

“ If our Public Library could purchase the *best general works on each main branch of science, a good, but moderately simple, work on medical subjects, engineering, etc., and the best encyclopædias, dictionaries and directories*, this would amply fulfil our requirements. We look for a guide to sources of information upon subjects with which we are not conversant.”

“ We look to the Public Library for *information on border-line subjects of a quasi-technical character*, on which our own or other more highly specialised libraries break down.”

“ We use our Public Library only for *very general information, e.g. a good general text-book on subjects quite outside our own scope*. We do

* No consideration has been given to the extent to which the libraries are used by members of the firms for private interests.

not expect to find in our local Library up-to-date material in our own special subjects, and usually when we require specialised information outside our own subjects we apply to a library known to specialise in the particular subject."

2. *The scope and up-to-dateness of the technical material in the respective subjects available in the Public Libraries.*

In almost all cases, the replies to this question reveal that the literature in science and technology is poor, both as regards scope and quality. It is generally admitted (*vide supra*) that in the London area, any attempt to equip the Public Libraries with a comprehensive *specialised* technical literature would, with the funds at their disposal, be a hopeless task, and that such allocation of funds, even if possible, would constitute a futile and inefficient dissipation of energy, in view of the ready availability of the cream of the special literature in the various specialist libraries within the area. It is urged, however, that there is a strong case for the provision in the London Public Libraries, of improved *general* technical and scientific text-book literature, for the satisfaction of readers seeking authoritative summaries of subjects outside their immediate purview. (In this connection it may be suggested that the ASLIB List of Recommended Books should be of considerable service to Public Librarians.)

3. *Experience with regard to speed of supply of material (a) in the Library, (b) borrowed from outlier sources, e.g. the National Central Library.*

(a) General experience appears to indicate that, in most cases, the rate of supply of literature already in the libraries is satisfactory. The opinion is, however, expressed that many books which are now placed in the Lending Section should more properly be located in the Reference Library.*

The relative importance of the Reference and Lending Sections of the Libraries, and the distribution of the literature between the two, must, it is presumed, be primarily dictated by the relative balance of local requirements, but it is suggested that the interests of sound technical and industrial development are best served by the existence, in all localities, of high-grade reference libraries, and that on the technical side, the interests of this section should always be paramount. Speaking from the point of view of one who is called upon to provide and also to seek information, I would urge that a very large proportion of the problems involving recourse to general text-book literature is of an urgent character and that in many cases, a book "out on loan" is as good as non-existent to the seeker.

In this respect, the technical sections of the Public Libraries stand on a somewhat different footing from the specialist library of the society or institution. Every qualified member of the public may be presumed to have the right to expect *constant availability* of *general information*: the member of the scientific or technical society, on the other hand, has paid to have available *more personally* a literature *more highly specialised* and shared with a *smaller public*. The specialist library, moreover, will probably hold alternative books which will meet the

* Our own experience confirms this statement.

needs of the enquirer, whereas the Public Library frequently holds only one or two authoritative treatises on any given subject.

In view of the necessarily limited amount of first-class technical literature available in the Public Libraries, it may be suggested that no book whose subject is not adequately represented in the Reference Library should be issued on loan.

The strengthening of the Reference Section of the Public Libraries would probably be of particular benefit to the smaller firms and the less wealthy members of the public, whose membership of scientific and technical societies is necessarily restricted, and in whose interests the Public Libraries primarily exist.

(b) Experience with regard to supply of material from outlier sources is dealt with under 5 below.

4. *The ability of Library staff to deal with enquiries for information on specific subjects, in the absence of notification by the enquirer of the actual literature required.*

The ability of Library staff to answer enquiries for information, as distinct from items of literature, varies widely, as would be anticipated, with the size and status of the library. A few correspondents report most successful appeals for the tracking of comparatively out-of-the-way data*: others refer to "moderate" success in this respect. In general, however, the replies received indicate that the service of London Public Libraries, with the exception of a few outstanding examples, is considered to be inadequate in this respect. It is admittedly open to question (a) to what extent this type of service is required in the London area in view of the accessibility of specialist libraries, and (b) how far a general-library staff can be expected to function as specialised information officers, but it may be suggested that whether in London or the provinces, increased efficiency in this respect would greatly enhance the value of Public Library service to enquirers who are without immediate access to more highly specialised sources of information.

The facts recorded suggest the desirability of additional (possibly more highly-trained) staff, to act as Information Officers, and of the provision of means whereby the staff may become more intimately and practically acquainted with practical technology and other industrial subjects. (See also p. 95.)

5. *The use made of the services of the National Central Library.*

The replies show that the services of the N.C.L. are becoming increasingly well known and used by technical information departments and research institutions. There is, however, an obvious need for dissemination among individuals and among many of the smaller firms, of a knowledge of the existence of this and other inter-library facilities.

* "It has been my experience when dealing with the Public Library in my district that the reference books I required have always been available or if not that the Assistants have been helpful and resourceful in suggesting alternatives. The only time I remember being disappointed was when I required details re the type of building and procedure in use for cock fighting in the eighteenth century, when the only books likely to be of use were on loan during the time I required them."

With reference to the N.C.L. service, a plea is advanced for speeding up of supply of material : it is also suggested that there is urgent need for extension of the co-operation of the N.C.L. with foreign libraries, in order to obtain more readily rare books which are classics in the respective sciences and industries and which are obtainable only in other countries.

In connection with the above criticisms, however, the present writer wishes to place on record that during the past two years material obtained through the medium of the N.C.L. has been supplied much more quickly than in earlier years, indicating that improved co-operation with a widening range of outlier libraries is progressively being achieved. The tracing and supply, within a few weeks, of a rare book published in 1691, from the library of Upsala University, is an example of the service of the N.C.L. which has recently come within our personal experience. It should be added that in this case the problem was complicated by the possibility of spelling the author's name in any one of six, apparently equally authentic, ways.

6. *The existence, in the respective localities, (a) of any mechanism for the interchange of ideas between the officials of the Public Library and the industrial user, and (b) of any systematic method of bringing to the notice of firms the services available through the Public Libraries.*

In no case was any affirmative reply received to these questions. Presumably in some of the provincial towns organised services of this type are in operation, but in the London area there would appear to be a lamentable lack of cohesion between industry and the Public Libraries. (See, however, p. 96.)

III

As a means of increasing the co-operation of the Public Libraries and the industrial public, the following suggestions may perhaps merit consideration :—

1. Regular representation on the Library Committees of the industries of the district. (A systematised rota for retirement would probably solve the problem of representation, even in areas covering many interests without recourse to committees of unwieldy size.) It is more than possible that this arrangement is already in force in some of the large industrial areas, but so far as I have been able to ascertain, it is not generally operative in London.

2. Organised visits to works and other industrial centres by members of the Library staff, in order to acquaint the supplier more closely with the practical needs of the user of information. The increased interest produced by such visits would, I believe, contribute materially to increased usefulness on the part of the library staff, by giving that sense of personal relationship to the subject which is one of the major qualifications of the first-class librarian.

3. Open days at the libraries, on which representative members of the local industries should be invited to inspect the libraries and familiarise themselves with the facilities available. As a sequel to such visits, it should be open to all interested to

make suggestions to the library committee for modification of routine, purchase of material, etc.

4. A regular system of notification of library accessions, of improved borrowing or reference facilities, etc., to firms in the areas served by the respective libraries.

In this connection the following extract from the "Report on the Municipal Library System of London and the Home Counties, 1934" (Library Association, 1935) is of interest :—

"Attention should be drawn to two activities of the Hornsey Libraries, which are a little unusual. The first is the sending of a circular letter to all new residents, informing them of the work of the libraries and inviting them to take readers' tickets. The second is a system of registering readers who are interested in special subjects, and informing them when books are added to the Library which deal with those subjects."

The progressive policy adopted by the Hendon Library (referred to in Mr. Walker's paper at the 11th ASLIB Conference) also indicates a realisation of the value of this type of service.

5. Compilation, for the use of the library staff, of a list of firms, specialist libraries, or other concerns within an accessible radius who are prepared to offer information on specialist subjects. (This could be partially compiled from the ASLIB Directory, and its preparation would probably be further facilitated by collaboration of the types referred to under 1-4 above.)

In conclusion it must be emphasised that the point of view expressed in this paper is limited strictly to the conditions of the London area and that the statements made must necessarily represent only a partial review of the practice and requirements of a large area containing widely diversified interests and problems. It is also realised that the material required by the industrial and commercial public comprises but a small fraction of the total mass* which the Public Libraries are called upon to provide, and that no section of the public is entitled to preferential treatment. The foregoing statement of the views of representative library users of a number of industrial groups may, however, be of some assistance to those responsible for library management, and thus ultimately contribute to the further development of the valuable services rendered by the Public Libraries.

I wish to make most cordial acknowledgment of the co-operation of the many firms and individuals who have so kindly furnished me with information, and of my colleagues in the Research and Development Department of the Mond Nickel Company Limited, who have provided introductions to firms and have otherwise rendered assistance in the preparation of this paper.

* "In ten years the growth of the library service of the London and Home Counties area has been such that (as compared with 1924) it now reaches one and three-quarter times as many people ; it issues nearly two-and-a-half times as many books ; it provides more than twice as many books ; and nearly three times as many persons are registered readers." (Library Association Report on "Municipal Library Systems of London and the Home Counties, 1934.")

The Sheffield Experiment—How it is Succeeding.

By J. P. LAMB, Esq., City Librarian, Sheffield.

I think that first of all I should disclaim any responsibility for the title of this paper. I do not know whose inventive and enthusiastic mind planned this part of the programme, but at all events it forces me to try to prove to you that our little venture into new fields of co-operation is succeeding. But this Association is at least entitled to take some modest pride in having staged one of the few Conferences at which a paper was read which led to practical results.

The Scheme for the interchange of Technical Publications in Sheffield—I give the full official title in the hope that someone might think of a better and shorter one—was inaugurated at a meeting held in December, 1932, at which representatives of six libraries and twelve firms in the Sheffield Area attended, and which was presided over by the Chairman of the Public Libraries Committee. At this meeting the general lines of the proposed scheme were put forward. It was suggested that the special libraries in the area and those firms which provided libraries, should pool their resources. It was pointed out that the general effect of such a scheme would probably be to speed up the supply of books required for research, because certain books, and particularly periodicals, which now had to be obtained from outside the city, might already be available in the area. The City Library's contribution to the plan was to offer to undertake the organisation and to relax the rules of non-loan of Reference Library books in favour of firms which in turn offered their own resources to other members.

The scheme, as outlined, was not without its critics, although most of the criticism was constructive; but some firms were frankly sceptical. The representatives of the six libraries in the area were all favourably disposed, and as the support of several of the greatest firms was also assured, a small Committee was formed to draw up a working plan.

Though it has not been thought advisable to publish the names of the firms which have accepted membership, it will help members of this Association to appreciate the scope of the organisation if I mention the libraries concerned in it. These are the City Library, which has a special Science and Technology Department, with a stock of some 16,300 books, 300 current periodicals, and an extensive range of specialist publications mainly relating to the steel trade; the University Library, whose Applied Science Department is equipped somewhat similarly; the Society of Glass Technology Library; the Safety in Mines Research Board Library; the Chamber of Commerce; and another library which shall be nameless, since, though its controlling body has officially adopted an attitude of benevolent neutrality, its enthusiastic librarian tempts providence by loaning books to us on urgent occasions.

I cannot speak too highly of the support given by these libraries to the scheme. Every reason of self-interest should urge them to remain aloof. They either serve specialist groups or are themselves special

organisations often not even local in character ; they rarely call on other members for service ; yet one and all have given freely time and material in order to make better the technical equipment of the district.

The Sub-Committee which went into the problems involved decided immediately that there would be no point in attempting to have a Union Book Catalogue of the Special Libraries. There were several reasons for this decision. First, the size of the task ; secondly, the fact that the majority of them had specialised stocks, the scope of which was readily definable ; and thirdly, because it is a comparatively simple matter to find out by telephone whether a book is available in a properly organised and catalogued library. It was clear, therefore, that the only book catalogue to be considered was one which would cover the books stocked in the thirteen works libraries which were members of the scheme, and it was also arranged that any books already in the City Library should not be recorded in the Union Catalogue.

The second part of the organisation, and perhaps the more important one, was concerned with the formation of a Union List of Periodicals, giving the extent of the files kept by the various members. This, of course, was a comparatively simple matter, as it could readily be done by each member submitting a list of periodicals. This, in fact, was the first task achieved, and the Union List, which is kept on cards at the City Library, was completed in a very short time.

The general scheme of organisation prepared by the Sub-Committee and accepted by the full meeting of members included the following six rules :—

1. Borrowing privileges to be restricted to members.
2. All requests for loan to be made through the Science and Technology Department of the City Library.
3. The period of loan to be fixed by each member for its own books and books to be returned within the stipulated period.
4. Members persistently dilatory in returning books, by agreement of the majority, to be denied further use of the scheme.
5. No books borrowed under the scheme to be used for home reading. Books to be lent to organisations, not to individuals.
6. Members not to be called upon to lend current periodicals, patents, directories, code books or quick reference books in constant use.

These are not very formidable, as the Committee was determined to keep the scheme as informal and elastic as possible. The Public Libraries Committee, in addition to accepting the heavy task of undertaking the full organisation, and the co-ordination of catalogue and periodical cards, also relaxed the rules of the Reference Library by allowing the loan of books from the Science and Technology Library to members for laboratory work. Obviously the scheme could not work without this concession, as its primary purpose was to provide material for research, and this, in steel technology practice in particular, involves the use of books in laboratory practice.

It had been clear from the beginning that the Union List of Periodicals would be of greater service if members could have a copy in a handy form. It was decided therefore to stencil the list. I should

explain that although the scheme was intended primarily for technical publications, it was felt that the more extensive the range of periodicals listed, the greater the potential usefulness of the list. Therefore, the periodicals listed included many dealing with pure science, and with applied science in fields not usually associated with local industries ; and, owing to the not very clear division between commerce and industry, many periodicals in the Commercial Department of the City Library. The Union List (a copy of which is here for inspection) contains records of 1,085 periodicals. The arrangement is alphabetical under title, or variations of title and subject, and in all cases a repetition entry was preferred to a reference, since there were no printing costs to limit our expansiveness. The List, as you will see, is typed in half column of foolscap, to leave room for additions. No locations are given, as it is part of the organisation method to insist on enquiries coming through the City Library in order to record use and check abuse. The location symbols were included in the copy sent to the National Central Library for obvious reasons. In order to keep the list current, members undertake to notify the City Library of deletions or additions every six months.

The preparation of the Periodical List and Book Catalogue was not quite so simple as it may appear to have been from this paper. There was a good deal of variation in the entries submitted, and much careful checking was necessary before complete accuracy of entry was achieved. Then the ability of the members to give us the material in a reasonable time varied considerably ; indeed, the only complaint I have to make is that a rather undue share of the work was put upon the enthusiastic and wholly admirable staff of our Science and Technology Library. But these troubles have been overcome, and the scheme is now in working order.

The Union Catalogue of Books was made by sending a number of printed slips to the works libraries, on which they were asked to enter all books which they are prepared to lend. This point was stressed throughout, as it was not thought desirable to list any book or periodical the loan of which might, on any pretext whatsoever, be refused. 2,006 slips were received, but a check by our own Catalogues showed that no less than 1,274 were in the City Library. The Union Catalogue of Books (which, as I have said before, is confined to works libraries) now contains 732 entries on cards ; not a great number, it is true, but as these are books mainly dealing with the steel industry which are not stocked in one of the best metallurgical collections in the country, their value as a supplement to the book resources of the district is out of all proportion to their actual number.

The method of loan is for a borrower to apply at the Science and Technology Library, either by telephone or messenger, for the book or periodical required. If the item is in the City Library, the loan is made there and then ; if in another library, its location is given and the borrower goes direct to the lending member, producing, of course, some authority for borrowing. Borrowers are responsible for the safe custody and return of all books loaned. It cannot, by its very nature, be a heavily used scheme, since it is intended only for highly technical material, but there can be no doubt that it has served a useful purpose in obviating delay in obtaining books and periodicals urgently required.

The scheme began to operate in a somewhat limited way in February, 1933, but as the various records became more complete, its use increased. The following are the records of use from the beginning of the scheme to the end of June this year, a period of two years and four months.

No. of items borrowed from the City Library	361
" " " " by " " "	54
" " " not in the City Library borrowed by members from one another	51
Total items exchanged	466

An average loan of about 200 items a year may not appear a large result ; but numbers mean very little in an organisation of this kind. There are other advantages. It has linked up the work of the City Library with the great industrial concerns in a way that has resulted in very friendly relations being established. Indeed, I think that the extraordinary increase in the use of the Science and Technology Library in our new building is to some extent due to the existence of this organisation. It has also helped to create what I may perhaps call a community spirit among the libraries in the area. The University Library has always collaborated willingly with us ; the Society of Glass Technology Library, with a very specialised and admirably exhaustive stock, has not called on the scheme once, but has lent freely and promptly ; the Safety in Mines Research Board Library has both borrowed and lent.

The main use among the works has naturally been by the four great firms which maintain research laboratories, staffs, and libraries. These have used the scheme consistently. Seven of the remaining firms have used it occasionally, and the remaining two not at all.

The contributions of the various firms to the scheme have naturally varied. Some have very little to offer, but since they have hitherto used so few books, their demands on the scheme have naturally been limited. A sort of natural balance has thus been maintained which allows the organisation to operate justly. If there are complaints, I have still to hear them, and I think I am on sure ground when I say that what you call the Sheffield Experiment has succeeded. It is a small effort in specialised library co-operation which has undoubtedly benefited the scientific and technical equipment of the Sheffield Area, and I have no doubt that when similar organisations are created in larger areas, the results will be correspondingly greater.

DISCUSSION.

Opening the session, the Chairman, MR. G. E. MILWARD, said that the subject under review was so broad that it would probably be helpful to start with some definitions and an analysis. By "Industry" was to be understood not only the functions of manufacture, of retail and of wholesale, but also the professions allied to them, advertising, accountancy, commercial law, banking and so on. For purposes of discussion, he would sub-divide Industry's expectations under three main headings : (1) *Research*. Here he would like to offer a word of warning. Processes and materials of manufacture have now become so technical as to render it undesirable for any Librarian to expect or to claim to be an expert on these thousands of chemical or engineering problems. In addition to Government technical research, the development of National Trade Federations and Associations,

part of whose duties is to maintain a research station and library, represent the best sources of recommendation of books or papers dealing with the latest techniques in product research. One example is the Paint and Varnish Federation which maintains a most modern research station at Teddington under Dr. Jordan.

(2) *Information.* Many business men have not the time to qualify themselves by reading or academic study for all the subjects which come occasionally within their orbit; they want, and at once, the solution to the problem. Where such information is technical, he would suggest reference to the Research Chemists dealing with the product.

(3) *Text Books for Education.* Mr. Milward thought that here possibly the Public Librarian could be of the greatest use to industry in helping the increasing number of thousands who are, or will soon be, wishing to qualify themselves for promotion. In conclusion, he emphasised again the necessity for co-operation in industry and between the special library and the public library, and that where really authoritative sources exist, such as the research libraries, use should be made of their knowledge.

The three papers were then summarised and discussion followed. With reference to Mr. Lamb's paper, Mr. A. W. SWAN of the United Steel Companies, Ltd., pointed out that an industrial company pursuing investigations and requiring books to assist in these investigations is not at all anxious that its competitors should know what it is studying and any system of interchange of books and technical articles among manufacturing companies in a city like Sheffield, which is a single industry town, would be a failure if it did not meet this point. Such a scheme could only be worked to safeguard this point if all books were requisitioned from members' firms by the central issuing library without any indication of its destination to the firm from whom the material is borrowed.

MR. CHARLES NOWELL, of the Manchester Public Libraries, emphasised that the relationship between Industry and the Public Libraries in the London area could not be taken as typical of what was being done in other parts of the country. The London Public Libraries were hampered by the division of the area into many boroughs, the population of each unit being too small to support a library with a first-class reference section. Great provincial Public Libraries such as Birmingham and Manchester, on the other hand, were able to help Industry to a far greater extent and did so in so far as the commercial secretiveness inherent in the greater part of Industry did not hinder the free distribution of information. It was the duty of the Public Librarian to make technical information accessible as far as possible, specially catering for the intelligent interest in modern processes shewn by junior members of industrial concerns. It is from this class of readers that the Industrial Directors of the future would arise.

PROFESSOR R. S. HUTTON commented on the immense progress that had been made in recent years with regard to the provision of technical literature by such Public Libraries as that at Manchester, and suggested that local committees of experts, with purely advisory powers, as "Friends of the Library", might be of considerable service to the Public Library Committees.

MISS E. M. FORCEY brought out the point that "Industry" should not be limited to include only the Managers and Heads of Research Departments. The particular value of the Public Libraries should be as a source of information and instruction to the rank and file of Industry from whom the future Executives will be drawn.

MR. J. H. PAFFORD said that as there had been no mention of co-operation between Public and Industrial Libraries except that achieved by Mr. Lamb in Sheffield, it seemed worth while to point out that Public Libraries had actually been in co-operation with special, including industrial, libraries for some years. Since each organisation of this kind had to be built to meet local needs, the word "experiment" could rightly be used of the Sheffield scheme, but Mr. Lamb would be the first to admit that work, at any rate of a somewhat similar kind, had been done elsewhere before the Sheffield scheme was thought of. In 1931, Queen's University, Belfast, issued a union catalogue of periodicals in the Belfast district including contents of the Public and of special technical libraries, of which a third edition had appeared. In 1930, or earlier, Birmingham University, and particularly Mr. Flack, had put forward a scheme and done some work on a union list of periodicals in Birmingham libraries of all kinds. This scheme was naturally dropped, or, rather, was incorporated in the formation of the West Midlands Regional Bureau. Up and down the country there are many interesting schemes of local co-operation which are ample proof of the fact that public libraries have not only been dealing with direct enquiries from "Industry" but have been actively co-operating with technical and industrial libraries for some years. It ought to be known also that

the Lancashire and Cheshire Branch of ASLIB has been compiling a union list of periodicals in industrial and technical libraries of the district since 1931 and that one set of each of these periodicals is being deposited in the Manchester Public Library. Mr. Pafford agreed with Miss Parker's remark that the National Central Library should be better known. Their new building and more adequate resources in the way of union catalogues and other material now enabled them to give better service and the Library was also making useful foreign contacts. In connection with borrowing from abroad, Mr. Pafford asked delegates to consider what requests were reasonable and what were not. In this Association there was a tendency to consider the business man, the industrialist, as all important whereas to the Library world in general his importance was just that of any other reader. The industrialist usually wants only the latest book or the current number of a journal, but to ask a foreign—or any other library—to lend such material is in most cases unreasonable. For reasonable requests, for the loan of material they would readily lend themselves, the National Central Library was ready to do the utmost in its power.

MR. H. ROTTENBURG referred to the fact that ignorance was the basis of a good deal of the prejudice against the free circulation of commercial information. The expert generally recognised that very few trade "secrets" were, in fact, wholly secret. He also suggested that the installation of Trade Catalogue sections in Public Libraries would be of very great interest and value and would help to eliminate a vast amount of waste and overlapping.

DR. A. SANDISON commented on the depressing fact that the competitive spirit between industries affected their attitude towards Library co-ordination. From the Library Committee point of view, however, industries represented only one section of the large population which had to be served and they could only claim special consideration up to a certain limit. He suggested that industry might gain some advantage by adopting the free interchange of knowledge common to the medical profession, a profession which, after all, rarely produces bankrupts.

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in the Dominions and mentioned particularly their advisors who report from Dominion and Colonial centres.

MR. R. HAXBY asked if Sir Stephen could qualify the statement appearing on p. 59 relating to the details of the Dominions and Colonial Offices' Library: "The printed books are arranged in order of acquisition"? If the statement conveyed the same meaning to the body of the audience as it did to him, it would indicate that the classification of knowledge, one of the essential tools of librarianship, was not practised. Sir Stephen replied that probably the statement merely denoted that the new books came in front of the old ones. In any case, one of the most useful advantages of not adopting too detailed classification was that in looking for a particular book one's attention might be drawn to other books, the existence of which might not otherwise be known.

MR. H. ROTTENBURG and MR. B. M. HEADICAR also took part in the discussion.

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records was made, it was found that they had been destroyed to make housing space for new hymn-books. MR. JUDGES replied that Church records were beyond the scope of his organisation.

MR. F. A. HOARE suggested that the preservation of business archives should not merely be a question of salvaging past records but should also take into account the material now being accumulated with relation to new enterprises such as Television.

MR. BERWICK SAYERS asked if the C.P.B.A. traversed in any way the work of the British Record Society? Public Libraries with other institutions were endeavouring to collect and catalogue manorial records and other legal documents which no longer possessed a solicitor's value. If to these were added the common business records of an ordinary community, very much larger libraries or depositories would be needed. He thought that some methods of selection should be laid down to prevent waste of time and space.

MISS M. DIGBY asked if the Council were in touch with the Industrial Co-operative movement.

Broadcasting and the Public.

Notes on the Response to Information Supply.

By R. S. LAMBERT.

Editor of "The Listener."

There is at present no simple and direct method of measuring the response which listeners make to the varied supply of information which they receive through the broadcast programme. Indeed, there is no one "public" in this sense at all, but a number of separate "publics," each representing a more or less specialised interest in this or that portion of the broadcast programme. Again, such response is to be measured in different ways. Sometimes it takes the form of action, sometimes of vocal or written expression of opinion. The public may respond to a broadcast appeal for a good cause by contributing sums of money; or they may respond to a message on the eve of a Bank Holiday by leaving less litter about—both these are responses taking the form of action. On the other hand, they may respond by letter writing or by telephone calls—though the average man does not habitually take trouble to express himself in this way.

However, although it is difficult to get any general view of the response of the public to the information which reaches them through broadcasting, it is possible to accumulate a number of facts each of which has some bearing on the problem or gives some specific instance, often illuminating, of the kind of response which the B.B.C. experiences. To achieve this we must take a kind of tour round Broadcasting House, consulting the various departments which are responsible for broadcasting information or making contact with the public.

PROGRAMME CORRESPONDENCE.

It is estimated that the B.B.C. receives a total of at least 150,000 letters a year, divided roughly as follows:

Appreciations	60,000
Criticisms	15,000
Enquiries	30,000
Requests and suggestions	7,000

The remainder consists of miscellaneous correspondence and letters forwarded to broadcasters to answer direct. In the course of the last three or four years there has been a substantial increase in the appreciation of informational talks (11,500 in 1934), which now ranks third in order, after Children's Hour and dance music; appreciation of religious transmissions is also a big feature (3,000 letters in 1934). There is a noticeable reaction of correspondence to programme changes of all sorts (e.g., 24-hour clock), as well as to newspaper comments and "stunts" relating to broadcasting. Incidentally it is curious that the word of a newspaper correspondent is usually believed before that of the B.B.C., even in regard to matters concerning which the B.B.C. alone possesses authoritative knowledge.

TECHNICAL CORRESPONDENCE.

The total of letters under this head is now about 30,000 a year. It varies inversely with the degree of completeness and efficiency of the B.B.C.'s supply of published information about its own technical developments and listeners' reception problems. In the early days of broadcasting, current information on technical developments and changes used to be given in the form of broadcast talks, but now it is mainly given through the medium of printed pamphlets. To-day technical correspondence consists largely of enquiries about individual difficulties arising out of interference, etc.

The curve of correspondence rises when new Regional transmitters are opened; but even this rise has become less pronounced in proportion as the B.B.C. pamphlets issued to explain the changes involved have become more complete. Thus, after the opening of Brookman's Park, the B.B.C. received a correspondence of 48,000 letters; but after the opening of the new West Regional Station only 650. Correspondence specifically arising out of the B.B.C. explanatory pamphlets issued on these occasions fell from several hundreds to a negligible figure. As the circulation and efficiency of the technical pamphlets rises, technical correspondence declines. Thus the pamphlet on the Lucerne Wave Plan (1934) circulated 35,000 copies; but subsequent correspondence arising out of this pamphlet was less than 1,000. Much of such correspondence comes from listeners who are "too proud" to apply for the pamphlet which contains the very information they want. They require to have in a personal letter from the B.B.C. Engineering Information Department what they could easily read for themselves if they merely took the trouble of applying for a free pamphlet.

Empire Correspondence, however, is still at the stage at which general correspondence was years ago. In this field the B.B.C. invites reports and observations from its listeners, to help it to work out its only partly completed policy. Three to four hundred letters a week come in under this heading, and are of the greatest assistance to the B.B.C. in developing the new service.

NEWS.

The general response to information service in news, as in the case of other B.B.C. services, is mainly deducible through reactions towards discontinuance or interruption of particular service items.

1. *Weather, Shipping, etc.*—The value of this service can principally be estimated from the outcry which arises when through any cause it is late or varied. Its success is also shown by the demand for more localised weather forecasts, and by the demand for the special forecasts (now conceded) for the herring fisheries off the Scottish and East Anglian coasts. Grateful letters are occasionally received from individuals (e.g., from yachtsman who owed his life to receiving a broadcast gale warning). Sometimes there are complaints, e.g., that the forecasts of the May frosts, 1935, were not couched as stronger warnings.

2. *News Bulletins.*—Correspondence is roused mainly by programme alterations, inaccuracies of detail, and, above all, wrong pronunciation

of words. There is also a small flow of accusations of bias, coming usually from both sides.

3. *Talks in News*.—These are greatly appreciated and produce a regular come-back of criticism and appreciation. Complaints arise when any feature or fact is missed. The public, it may be said, hates any new feature of information being dropped.

4. *Sports News*.—This produces a keen response, often in the form of complaints (e.g., when two of the announcers read the racing results too fast). There is a demand that the sports news should be put first.

S.O.S. AND POLICE MESSAGES.

During 1934 there were 889 messages broadcast (759 from London and 130 from provincial stations). The percentage of success was 56.58, while 40.72 were unsuccessful. The messages were divided into :

Illness	..	..	..	..	..	368
Witnesses	..	..	..	..	..	118
Crime and Special	..	..	..	..	..	17

The highest proportion of success was in the case of illness (58.97), the other proportions being : witnesses, 54.14 ; crime and special, 36.17. Since 1933 there has been an enormous increase in the number of messages broadcast for witnesses of accidents ; in fact, it has nearly doubled.

APPEALS.

Obviously one of the most definite indexes of listeners' response to broadcast information is the result of broadcast appeals. Two Sundays a month are reserved for appeals on behalf of national causes broadcast throughout the country, such as the British Legion, the Salvation Army, etc. On the other Sundays in the year separate appeals are broadcast for more restricted or purely local interests. The kind of subjects included are : hospital, health research, clubs, and settlements, children's homes and holidays, moral welfare institutes, relief agencies, benevolent funds, etc. These appeals are, of course, often broadcast by celebrities of various kinds, but successful response depends as much upon the microphone personality as upon the fame of the broadcaster. The financial results of appeals during recent years have been as follows : 1932—£99,000 ; 1933—£86,000 ; 1934—over £117,000. This last figure can be analysed as follows : National, London and Droitwich, £94,000 ; provincial, over £11,000 ; Wireless for the Blind (special appeal at Christmas), over £11,000. The record sum received for an appeal was in 1928 when Lord Knutsford drew £19,050 for the London Hospital. Nowadays £1,000 is considered to be a good result for a National appeal, and less than £500 quite a poor one (incidentally, there was once a local appeal which brought in nothing). An interesting analysis was made of the appeal for the Middlesex Hospital on December 23, 1934 : this shewed that out of 442 replies, 366 came from south of the Trent and only 14 north of the Tweed. Since the result of the appeal, however, was a poor one (only £387), the statistics cannot be taken as typical.

TALKS FOR DISCUSSION GROUPS.

Though the Talks especially arranged for members of Wireless Discussion Groups appeal only to a limited proportion of the total wireless audience, there is some concrete evidence as to the nature of their response to these talks. The latest return showing the number of these discussion groups is as follows (previous year's figures in brackets for comparison) :

Area	Autumn, 1934	Spring, 1935	Summer, 1935
Scotland	136 (101)	110 (75)	1 (13)
North-West	149 (120)	176 (144)	38 (56)
North-East	240 (174)	293 (201)	112 (82)
Midland	59 (75)	54 (76)	10 (16)
West	26 (37)	23 (37)	13 (18)
Wales	11	35	12
	} (73)	} (83)	(52)
Home Counties ..	11	27	10
Total	632 (580)	718 (616)	196 (237)

The total number of groups during the session 1934-35 was thus 1,536, compared with 1,433 for the previous session, 1933-34.

When the special programme of talks for discussion groups which is published by the B.B.C. used to be sold (it is now distributed free), its sale was about 10,000 copies. This gives less indication of listener's response, however, than the sale of talks pamphlets. During the past six or seven years a large number of well-produced, well-illustrated pamphlets have been issued as "aids-to-study" to accompany these special talks. Among these pamphlets the subjects reaching the highest circulation have been Psychology (*How the Mind Works*, by Dr. Cyril Burt), which sold 22,000 copies, and Art (J. E. Barton's Talks on "Modern Art") with a circulation of 20,000. Pamphlets dealing with other subjects, such as Economics, usually sell from ten to fifteen thousand copies. But still more popular are the Foreign Language talks; the pamphlets issued to go with these talks find the following circulation :

German : first year 33,000 ;
 second year 17,000.

French : first year 26,000.

Spanish : second year 8,000.

Since this is a paid circulation, it is some indication of the large number of listeners who take up these language courses. At the other end of the scale, Herr Kroemer has reported that when, at the close of his course, he suggested to his listeners that they should send in a piece of German translation which he would correct and mark, the number of papers sent in was about 850, the average standard of marking being 60 out of 100. He further offered to arrange further group study for

those listeners who cared to continue their German studies after the end of the broadcast ; and the response to this was 650.

Information as to the precise value of the bibliographies appended to the outline of broadcast lecture courses, either in the programme or the pamphlets, seems indeterminate. The B.B.C. Adult Education section is in close touch with librarians all over the country whose opinions are divided, some saying that these bibliographies influence book choice and reading, others not. A year ago bibliographies were for the first time left out of the general Talks Programme, which has a circulation of 200,000 copies. The county librarians for Nottingham and Derby subsequently reported that they had noticed a falling-off in the circulation of books mentioned in our bibliographies consequent upon their non-inclusion in the general talks programme and their inclusion only in talks pamphlets. This seems to be slight evidence that these bibliographies are of some use.

Generally speaking, there is close co-operation between public librarians and the Adult Education Section of the B.B.C. In his latest report the Education Officer for the Home Counties (covering the area between the Wash and Bournemouth) says : " My first call in a new place is always on the librarian, who can tell me more about the neighbourhood and its tastes than anyone else. This is true of county as well as borough librarians." The publicity work of librarians in connection with broadcast talks includes distributing pamphlets in bulk, displaying B.B.C. posters, and in some cases reserving special shelves for books connected with the broadcast programmes. Unfortunately it is difficult to get exact statistical information of the results of this kind of work. There are, of course, also a number of wireless discussion groups meeting in public libraries. The Education Officer previously quoted writes : " As far as I know, there are only three groups meeting in libraries in my area, but this is largely due to the premises, which are often gloomy and inadequate. This represents, on the whole, the general experience in B.B.C. educational work."

MORNING TALKS.

Although these talks are arranged at a time when many people cannot listen, they draw a large response, not only from women but from all sections of the community. The talks are concerned with a variety of general topics (including books, music, and travel), and especially with food and cookery and child welfare. Some estimate of the influence exerted by these talks can be gathered by the sales of the pamphlets issued to go with the cookery and child welfare talks ; during the past two years no fewer than 370,000 copies have been applied for and bought (price 3d. each). These pamphlets mostly contain cookery recipes, but two have been issued in connection with the Child Welfare talks, the first dealing with the feeding of babies from six months to five years old ; and, secondly, with choosing the right food for the whole family. The latter pamphlet sold 50,000 copies.

Apart from this evidence based on the purchase of pamphlets, the response of the public can only be measured by incidental episodes, e.g., the number of photos sent in to the department of " B.B.C. babies," i.e. babies brought up on the dietary and advice broadcast in these talks. When Miss Helen Simpson, the novelist, gave a series

of cookery talks, she was overwhelmed with no fewer than 20,000 applications for her recipes. Again, when an official of the Malayan Information Bureau gave a five minutes' talk on pineapple-growing in Malay, he was surprised (and disconcerted) to receive nearly 3,000 applications from his hearers for copies of a leaflet on the diverse gastronomic uses of tinned pineapple! Another example is provided by the superintendent of a well-known fish market, who told the B.B.C. that the sale of herrings substantially increased as a result of the constant recommendation of herrings as an article of diet in the morning broadcasts. In another direction we have the opinion of the Central Committee for Women's Training and Employment that the talks given on the work of domestic training centres of the Ministry of Labour produced an excellent response from applicants desirous of taking the official course in training for domestic service.

Sometimes the good effect of these educational talks is offset by the unexpectedly doubtful effects of a few general talks; for instance, Gipsy Petulengro received 10,000 or 12,000 requests after his recent broadcasts for recipes of gipsy remedies for various ailments, of which medical authority would hardly have approved.

SCIENTIFIC TALKS.

One of the most valuable responses of sections of the public has been towards scientific talks, where the broadcaster has aimed at seeking the co-operation of amateur scientists in making observations and supplying information which can be of use for purposes of research. Examples of these are (1) Professor Seligman's talks on Dreams. He asked his audience to supply records of their own dreams, and their replies enabled him to prepare valuable material on the subject of Type Dreams. (2) Dr. Shaxby, the physicist, broadcast a series of tests inviting his listeners to say whether they could hear particular notes, which enabled him to gather data to throw light on the study of "Deafness of the Middle Ear." (3) Dr. John Baker compiled and published a paper in the Journal of the Zoological Society which is now a classic on the subject of the Date of Egg-laying of Blackbirds. This was part of a general study of the migration of animals and birds — an important aspect of which is their breeding seasons. In his broadcasts on Woodland Birds, Dr. Baker invited listeners to supply him with information about the egg-laying habits of blackbirds in their neighbourhood. He received help and information from all over the country, in particular from various natural history clubs established at schools. (4) Mr. B. J. Marples, a young zoologist of Manchester, similarly broadcast an appeal for help from those of his listeners who had observed the habits of starlings. He asked for information about starling roosts, their location, size, etc., as a result of which he was able to collect a complete record of starling roosts in all parts of the country. This piece of research has a definite commercial interest, since starlings have only been known in this country during the past sixty or seventy years. They are very destructive to crops, and an increase of knowledge of their habits is of great use to the farming community.

The above are all recent examples of scientific information supplied by the public in response to broadcast talks.

The method has also been applied to sociological problems, e.g.,

in the famous and elaborate questionnaire on the Family sent out by Sir William Beveridge in connection with his broadcasts. Twelve thousand replies were received to this questionnaire, and the results were tabulated and filed at the London School of Economics, where they are available for research students. One study based upon them has already been published dealing with "Scholastic Achievement in Order of Birth."

SERVICE TALKS.

These are weekly talks given usually in the earlier part of the evening and supplying listeners with a service of information and criticism in regard to various special interests.

1. *Gardening*.—These weekly talks are almost wholly informative, consisting of hints as to the care and planning of gardens. Although no request for letters is made, the gardening speaker gets more requests for information than any other. The average number of letters received during May and June of this year was 89 a week. As an indication of the response of listeners, the speaker during the course of one talk announced that he had a list of seeds which he could supply to those sending him a stamped, addressed envelope. Within a few days more than 8,000 requests were received.

2. *Films and Plays*.—It is more difficult to assess the response of listeners to the information given in these talks. They are criticisms of current plays and films, and there is no means of telling how many listeners are guided in their choice of plays and films by the suggestions made in these talks.

3. *Books*.—The same difficulty of assessment is present in the weekly talks on books. It is, however, significant that libraries have announced that they experience an immediate increase in the demand for books that have been mentioned in these talks. It is quite usual for a number of book-sellers to telephone to the B.B.C. the following morning for information as to the books mentioned in the talk, as they have customers wanting to buy them.

4. *Farming*.—These talks give information of two kinds. They keep the farmer in touch with the latest political happenings as far as concerns the farmer, the policy of the Marketing Boards, and so on, but they are chiefly devoted to giving information on the practical aspects of farming, and as such are listened to very widely. Although the number of letters received from farmers each week is not as a rule above 50 or 60 (farmers are notoriously disinclined to write letters), there is evidence that a great proportion of farmers listen to these talks. They are frequently discussed at local meetings of the National Farmers' Union, and mention of the talks, and the speaker in particular, is heard frequently in market places, sales, and places where farmers gather. Last year, when the B.B.C. had a stand at most of the large Agricultural Shows, a very great number of farmers came to the stand on purpose, in order to discuss the talks, to which they listened regularly, and to be put in personal touch with the speaker.

5. *Unemployment*.—(a) *Information to Unemployment Clubs*.—The B.B.C. has for some time run special talks to Unemployment Clubs (they are only now being temporarily discontinued). These talks were useful as a means of increasing the activities of clubs, and they served as a kind of magazine for the club movement, through which ideas and

suggestions could be shared. Unemployed Club leaders came to the microphone each week and gave an account of special activities in their clubs, with suggestions as to how the same activities could be introduced into other clubs. This service was supported by talks in the same series by experts on allotment gardening, poultry, and rabbit-keeping, Drama Groups, Group singing, etc.

Although the direct response to us was not very great, a number of protests were received when the service was discontinued. The National Council of Social Service, who are in touch with the majority of Unemployed Clubs and Centres, estimated on information given them by their regional advisory officers that a large majority of the Clubs equipped with sets were listening to and acting on the advice given in these talks.

(b) *Information Service*.—A direct service of information was set up in conjunction with the National Council, by means of which unemployed men and women in difficulties over any of the public social services could get information on their case by writing to the B.B.C. This service was run in conjunction with a series of talks explaining in simple terms the meaning of the Social Services, and clarifying their regulations. As the B.B.C. was unaware of what response there would be to this new service, the talks were placed at a time of the week (11 on Monday mornings) when response was likely to be limited; but in spite of this, 7,111 letters were received and answered during the three months in which this service ran.

DISCUSSION.

The Chair was taken by MR. A. C. CAMERON, M.A., Secretary of the Oxford Education Committee. Contributors to the discussion were PROFESSOR R. S. HUTTON, MR. H. ROTTENBURG, MR. B. M. HEADICAR, MR. J. J. EATON, MR. JOHN McADAM, MR. CHARLES NOWELL, and MISS E. M. FORCEY. The repercussions of B.B.C. talks as felt by various Public Libraries were mentioned and showed some interesting variations in different parts of the country. Attention was drawn by Professor Hutton to two articles in the *Listener*, April 17th and 24th, 1935, describing an enquiry into the effect of B.B.C. information on a wide range of typical listeners.

Final Session and Round-Table Meetings.

At the final session of the Conference the Chair was taken by Professor R. S. Hutton. The delegates passed votes of thanks to the Master and Fellows of St. John's College for their hospitality in allowing the Conference to be held at the College, and to the President of ASLIB, Sir Richard Gregory, for his kindness in attending the meetings. Votes of thanks were also passed to the authors of papers, the Chairmen and Stewards of meetings, the Junior Bursar and staff of St. John's College, to the University Library Syndicate, to the staff of ASLIB, and to Professor R. S. Hutton for his help in dealing with the local organisation of the Conference.

The formal proceedings of the Conference then ended, but on the Monday morning Round-table Meetings were held to discuss certain questions of ASLIB policy, such as the new Quarterly List of Recommended Scientific and Technical Books and the Panel of Expert

(Continued on p. 112)

Report of the Tenth Annual General Meeting.

The Tenth Annual General Meeting of members and associate members was held at 5.30 p.m. on Saturday, September 21st, 1935, at St. John's College, Cambridge.

Present : About fifty members and associate members were present.

Chairman : Professor R. S. Hutton (Chairman of the Council of the Association) acted as chairman of the meeting.

ITEM I. Minutes of Last Annual General Meeting.

The Minutes of the 9th Meeting, having been printed and circulated with the last Conference Report, were taken as read. It was agreed that they should be confirmed and signed as correct by the Chairman.

ITEM II. Audited Statement of Accounts for 1934-1935.

In the unavoidable absence of the Hon. Treasurer, Mr. A. F. Ridley, the Audited Statement of Accounts was presented by the Hon. Secretary, Mr. F. A. HOARE. This had already been circulated, and on the motion of Mr. F. A. HOARE, seconded by Mr. MACADAM, it was accepted.

ITEM III. Appointment of Auditors.

On the motion of Mr. A. B. BLAKE and seconded by Mr. A. W. SWAN, it was unanimously resolved that Messrs. West & Drake be reappointed auditors to the Association. Mr. A. B. Blake drew attention to the desirability of setting out the accounts in rather more detail and showing comparison with the previous year, and suggested that the advice of the auditors might be taken on this point.

ITEM IV. Election of Council.

The CHAIRMAN announced that the list of Council and Officers, nominations and resignations had been circulated. Mr. J. E. Hodgson had resigned the membership of the Council and the following had accepted nomination : Mr. B. C. Curling, Mr. Alexander Farquharson, Dr. E. E. Lowe, and Miss E. W. Parker.

On the proposal of PROFESSOR R. S. HUTTON, the following elections and re-elections as members of the Council were unanimously approved : Dr. S. C. Bradford, Mr. E. Carter, Miss M. E. Cleeve, O.B.E., Mr. B. C. Curling, Miss B. M. Dent, Mr. A. Farquharson, Mr. F. A. Hoare, Dr. E. E. Lowe, Mr. F. C. Mitchell, Mrs. C. S. Orwin, and Miss E. W. Parker.

The full list of members of the Council will be found on page 4.

ITEM V. Election of President.

It was unanimously agreed that Sir Richard Gregory, Bart., F.R.S., should be re-elected as President of the Association.

ITEM VI. Election of Honorary Treasurer and Honorary Secretary.

It was unanimously agreed that Mr. A. F. Ridley (Honorary Treasurer) and Mr. F. A. Hoare (Honorary Secretary) should be re-elected. On the motion of PROFESSOR R. S. HUTTON, seconded by MR. R. BRIGHTMAN, it was unanimously agreed that a message of sympathy should be sent to Mr. A. F. Ridley for his inability to attend the Conference owing to the illness of Mrs. Ridley.

ITEM VII. Reports from Kindred Organisations.

A report of the National Central Library (*see* page 116) was presented by MR. J. H. PAFFORD on behalf of Colonel L. Newcombe, who was unavoidably prevented from attending. Other reports from kindred organisations of interest to members of ASLIB (*see* page 117) were summarised.

ITEM VIII. Report of the Year's Work of ASLIB.

PROFESSOR R. S. HUTTON then presented the Report of the Year's Work of the Association (*see* page 12) and proposed its acceptance. Subject to certain minor amendments, MR. R. BRIGHTMAN seconded the proposal, which was adopted.

In connection with the Report on the Book List, Professor R. S. Hutton paid a tribute to the work of the Committee under Dr. E. E. Lowe. DR. LOWE emphasised that in the future development of the List it was desirable to bear in mind two points: (1) that the range of subjects should be extended; (2) that every effort should be made to see that the whole field of literature in each subject was adequately surveyed in order that a just selection might be made therefrom. MR. B. C. CURLING suggested that the Book List and the Bulletin should be combined, but MR. A. W. SWAN pointed out that this would be of no advantage to research workers whose only interest was in the Book List. At the close of the discussion PROFESSOR HUTTON intimated that he hoped that as many members as possible would attend the Round-table Meetings on Monday morning, since ASLIB needed all the help and constructive criticism that it could get from its members.

(Continued from p. 110)

Technical Translators. About thirty members were present, and the discussions brought to light a number of interesting and helpful points. No formal vote was taken, but it was clearly evident that members were in favour of putting the October Book List on sale to non-members of the Association. Discussing the slight use made of the Panel of Expert Translators, it was considered that the services might be made available to non-members, since the consequent wider use of the panel would bring with it valuable publicity for ASLIB.

ASSOCIATION OF SPECIAL LIBRARIES AND INFORMATION BUREAUX.

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 30TH JUNE, 1935

DR.	EXPENDITURE.			INCOME.			CR.		
	£	s.	d.	£	s.	d.	£	s.	d.
To GENERAL EXPENDITURE—				By GENERAL RECEIPTS—					
Salaries	392	1	9	Membership Subscriptions	556	18	0		
Rent, Light and Telephone	71	0	5	Bank Interest	14	1			
Insurance	2	14	2					557	12
Printing, Stationery, Postage and Office Expenses	118	8	6	SALES OF DIRECTORY				1	0
Reference Books	1	8	7	“ “ REPRINTS AND PAPERS				9	8
Travelling Expenses		11	5	“ CONFERENCE RECEIPTS—				2	19
Press Cuttings	2	2	0	“ Fees and other receipts				289	16
Audit Fee	5	5	0	“ Sale of Reports				26	0
Income Tax		6	9	“ Advertisements in Report				17	16
Depreciation of Furniture and Fittings	4	4	6					333	12
	598	3	1	“ RECEIPTS <i>re</i> TRANSLATOR'S PANEL				3	5
COST OF CONFERENCE REPRINTS AND PAPERS									
BOOK LIST EXPENSES		5	15						
COST OF 1934 CONFERENCE—		3	15						
Conference Expenses	177	8	9						
Printing of Conference Report	108	7	6						
	285	16	3						
EXPENSES <i>re</i> TRANSLATOR'S PANEL		10	6						
	894	0	4						
BALANCE, being excess of Income over Expenditure for the year, carried to Balance Sheet		12	16						
		£906	16					£906	16
			9						9

30TH JUNE, 1935

LIABILITIES.		ASSETS.	
£	s. d.	£	s. d.
To SUNDY CREDITORS	1 15 6	By CASH AT BANK, Current Account	55 9 7
„ SUBSCRIPTIONS IN ADVANCE	16 16 0	„ CASH IN HAND	5 11 11
„ WORKING CAPITAL—		„ SUNDY DEBTORS	
As at 30th June, 1934	72 7 1	„ FURNITURE AND FITTINGS—	
Add Excess of Income over Expenditure		As at 30th June, 1934	36 7 0
for the year	12 16 5	Additions during year	5 18 6
	85 3 6		
		Less Depreciation at 10 per cent. per annum	
			42 5 6
			4 4 6
			38 1 0
	£103 15 0		£103 15 0

We have audited the above Balance Sheet and have obtained all the information and explanations we have required. In our opinion such Balance Sheet is properly drawn up so as to exhibit a true and correct view of the Association's affairs, according to the best of our information and the explanations given to us and as shown by the books of the Association.

(Signed) ARTHUR F. RIDLEY, *Hon. Treasurer.*
(Signed) R. S. HUTTON, *Chairman of Council.*

(Signed) WEST AND DRAKE, *Chartered Accountants.*
26th July, 1935.
8, New Court, Lincoln's Inn, London, W.C.2,
and at Reading.

St. John's College Library

By kind permission of the Master and Fellows of St. John's College, those taking part in the Conference visited the Fellows' Combination room and the Library on the Friday evening.

The Combination Room is approached by a staircase in the front corner of the second court and through this the Library is entered. The Gallery, which forms the Combination Room, was 187 feet long before 42 feet were sacrificed to make a vestibule for the Library and is one of the most beautiful in Cambridge; its ceiling dates from 1600 and the panelling from 1603.

The Library was built in 1623-38 largely by the generosity of Lord Keeper Williams, and this upper part has been little altered since it was built. The intermediate (or lower) cases were heightened to the extent of one shelf for folios when Thomas Baker left his books to the College; but two, on one either hand next the door, retain their original dimensions, with the sloping tops to be used as reading-desks.

At the end of each of the taller cases, in small compartments with doors, are class catalogues written about 1685. These catalogues have been pasted over original catalogues written about 1640, but small portions of the earlier catalogues are yet to be seen in some of the cases. Of the treasures in manuscript and print only a slight account can be given here. One of the most interesting to members of the College is the following note by John Couch Adams:

"1841, July 3.—Formed a design, in the beginning of this week of investigating, as soon as possible after taking my degree, the irregularities in the motion of Uranus, wh. are yet unaccounted for, in order to find whether they may be attributed to the action of an undiscovered planet beyond it; and is possible thence to determine the elements of its orbit, etc. approximately wh. wd. probably lead to its discovery."

The original memorandum is bound up in a volume containing the mathematical calculations by which Adams carried out his design and discovered the planet Neptune.

Lord Keeper Williams presented to the Library many books; amongst others the Bible known as Cromwell's Bible. Thomas Cromwell employed Miles Coverdale to revise existing translations, and this Bible was printed partly in Paris and partly in London, "and finished in Aprill, A.D. 1539." Two copies were printed on vellum—one for King Henry VIII, the other for Thomas, Lord Cromwell, his Vicar-General. This College copy is believed to be that presented to Cromwell; the volume is beautifully illustrated and has been described as "the finest book in vellum that exists."

The show cases in the centre of the Library contain many interesting historical treasures which have long been preserved by the College. The recent canonisation as an English Saint of Bishop John Fisher is called to mind by a very recent gift to the College by the Pope of a special medal struck to commemorate the canonisation of Sir Thomas More and Bishop John Fisher. The foundation of the College in 1511 by Lady Margaret, Countess of Richmond and Derby, is mainly due to Fisher, who was a most active Chancellor of the University for many years.

To Dr. Newcome, Master from 1735 to 1765, the College owes a very fine collection of early printed classics; among these is a copy of *Ovid* printed by Jacobus Rubaeus at Venice in 1474, formerly in the possession of Lorenzo de Medicis. Dr. Newcome and Thomas Baker share between them the distinction of having added many of the chief glories of the Library. Matthew Prior, the poet, a Fellow of the College, presented his own works and many interesting French and Italian works on history. There is also a presentation copy of his poems from Wordsworth who was at St. John's from 1787-91.

At the end of the Library an iron staircase leads to a lower floor in which the rest of the books are housed. In addition to loyally preserving its ancient Treasures, the Library takes an active part in serving the needs of present-day members of the College including undergraduates.

The Librarian is Dr. C. W. Previté-Orton, F.B.A., well known as editor of the *English Historical Review*, the *Cambridge Mediaeval History*, and other works.

Reports.

Following the Annual General Meeting reports were received from the following organisations whose work is connected with and of special interest to members of ASLIB. Moreover, Dr. Jurgens, through Fraulein Dr. von Busse, has sent to ASLIB a copy of the "Verzeichnis der ausländischen Zeitschriften, 1934," mentioned in her report. We have also received a number of copies of the "Übersicht der Auskunftstellen nach dem Fachbereich," the review mentioned in his report by Dr. Freitag. These are available to members on application to the ASLIB Office.

THE NATIONAL CENTRAL LIBRARY.

Report from Colonel L. Newcombe. The past year has been a most encouraging one. It has seen a marked development in library co-operation, upon which the success of the National Central Library so much depends. Not only has this co-operation led to a greatly improved book service to the public, at a cost which is so trifling from a national point of view that it may almost be ignored, but it has also been the means of bringing the authorities and librarians of all types of library into closer touch with one another, to their mutual benefit.

The number of Outlier Libraries is 149, representing an increase of ten on the previous year's total. Ninety-four of these libraries are special libraries, and the remainder urban or county libraries. They contain no less than 5,846,000 volumes, including some 31,000 sets of periodicals. 11,231 books were lent by the Outlier Libraries during the year. Of this total, 7,830 were lent by the special libraries. In addition, this group of libraries has lent 10,023 books to other libraries in their regional areas, the total assistance given by the Outlier Libraries thus being 21,254, a figure representing an increase of 2,361 over the corresponding figure for the previous year. The value of the assistance given by the Outlier Libraries will be better appreciated when it is realised that almost without exception the books lent could not have been obtained in any other way. The striking progress made by the Outlier Library system is illustrated by the fact that ten years ago only 362 books were obtained from this source.

The outstanding feature of the year has been the progress made in regional library co-operation. No less than eight regional systems are now in active operation. These systems cover the whole of England and Wales with the exception of seven counties in the South-west. There is every reason to hope that a South Western Regional System will be established in the near future, as well as one for the whole of Scotland. The eight regional systems include a group of 371 libraries, of which 33 are special libraries and 13 university libraries. In addition to the regional systems, 26 of the Metropolitan Borough Libraries are now co-operating in an inter-lending system. This system is of particular interest to ASLIB, as it is based upon the union catalogue of the London Public Libraries, which, to a large extent, owes its origin to a paper read at the ASLIB Conference in 1927.

As a result of the establishment of the regional systems the co-operating libraries obtained 8,113 more books than they did in the year before the regional systems were founded, when they had to depend solely upon the National Central Library.

The number of books lent to the university libraries through the agency of the National Central Library shows a considerable increase. It is of interest to note that not only do the university libraries lend to one another, but that they are also taking a substantial share in the national library service, 1,277 books having been lent to other libraries through the National Central Library and the regional bureaux.

The number of books borrowed from libraries in fifteen foreign countries for the use of libraries in Great Britain has decreased from 90 to 82. On the other hand, libraries in Great Britain have been able to lend to libraries in fifteen foreign countries 239 books, as compared with 125 in the previous year. These figures are small, but they represent work of the greatest importance, as application is only made between foreign libraries in exceptional cases, and only when no copy of the book is obtainable in the reader's own country. There is no longer any justification for the accusation once made by foreign librarians that libraries in Great Britain were often borrowing books from abroad but rarely lending in return. During the last seven years British libraries have lent to foreign libraries 1,020 books and

borrowed only 382, figures which help to show the rapidly growing efficiency of the British library system.

Owing to lack of staff, the union catalogue of the books in the Outlier Libraries, which would be of such great value, continues to make only slow progress, the total number of entries being approximately 150,000. This progress would be even slower were it not for the generous and much-appreciated assistance given by the librarians of many of the Outlier Libraries in supplying copies of their accession cards. The total number of entries in the various union catalogues at the National Central Library is 1,885,000, and in the National Library of Wales 467,000, representing a total in the combined national union catalogue of 2,352,000.

THE INTERNATIONAL INSTITUTE OF DOCUMENTATION.

In 1934 no Conference was held but the Council met in Brussels and decided about various new publications. A new form was given to the Bulletin of the Institute: the "I.I.D. Communicationes."

CATALOGRAPHIC RULES.—A scheme of auxiliary international rules was elaborated by Mr. Charles Sustrac.

TERMINOLOGY.—A German version of the terminology as elaborated by Mme. Dupuy was drafted by Herr Walther and published.

PHOTOGRAPHIC PROCESSES.—Mr. van Asperen was asked to study the existing photographic processes for documentary purposes and to prepare a summary report, which was published in the I.I.D. Communicationes.

COPYRIGHT WITH A VIEW TO PHOTOGRAPHIC COPIES.—A summarising report was drafted by Dr. de Haan.

CO-OPERATION BETWEEN INFORMATION BUREAUX.—The mutual help of bibliographic information services is under consideration. Moreover, in practice such co-operation is constantly increasing between the institutions adhering to the I.I.D.

DECIMAL CLASSIFICATION.—See report of the International Commission for Decimal Classification.

BIENNIAL CONFERENCE.—The 1935 Conference will be held in Copenhagen, 9th September, 1935. About 40 reports are submitted. The volume of reports has appeared. Repertory of Persons and Institutions interested in International Documentation was composed by Mr. Roeloffs Valk.

EXECUTIVE COMMITTEE.—President: Dr. Alingh Prins; General Secretariat: Henri La Fontaine, F. Donker Duyvis; Members: Dr. S. C. Bradford, Jean Gerard, Carl Walther.

THE INTERNATIONAL COMMITTEE OF DECIMAL CLASSIFICATION.

Summary of a report by Mr. F. Donker Duyvis. (The full report, which includes an account of the new development of the U.D.C., can be seen on application to the ASLIB Office.)

GENERAL ACTIVITY.—There has been no meeting since the Annual Meeting in August, 1934, all questions being dealt with by correspondence. Forty-nine lists of Proposals of Extensions to the Classification (PE No. 48-96) and sixty-five Supplementa et Correctiones Classification Decimalis were issued, the latter being distributed with the I.I.D. Communicationes. Owing to lack of funds, the number of extensions published is not equal to the number of extensions proposed and adopted in the PEs, but they will all be published in the new edition of the U.D.C.

NEW EDITION OF THE U.D.C.—Most of the activity has been concentrated on the preparation of the German edition. The first four sections of the 1927-1929 edition (2nd full edition) were not developed to the same extent as the sections on pure and applied science, and it was a difficult task to develop them without introducing new numbers which might conflict with those previously in use. We are greatly indebted to Professor Hans Sveistrup of the Staatsbibliothek (Berlin) who has completed this work. In consequence, publication of the second fascicule of the German manual had to be postponed. (For details of the work in sections 31-4, 53, 551.5, 56, and 59 see the full report.)

BRITISH COMPLETE EDITION.—The British Society for International Bibliography, in conjunction with the Association of Special Libraries and Information Bureaux, and a panel of expert editors, is engaged in the production of a complete English edition to the Classification. The edition is based on the French and German editions, and will incorporate the additional classes and amendments which are

included in the latter. It is the intention to issue the English editions in large sections beginning with the Auxiliary Tables and Class O, followed by classes 5, 62, and 63 at an early date, and proceeding with the classes concerned especially with Science and Technology as these are revised by the German edition. The edition will finally be completed by the publication of the non-scientific and non-technical classes. Class O is now in the hands of the printer.

ABRIDGED EDITIONS.—The Dutch abridged edition was published in March of this year under the editorship of Mr. Roeloffs Valk. It comprises about 5,700 subdivisions. The next abridged edition will be the Rumanian one, edited by Mr. Dragulescu under the auspices of the Association of Engineers of Bucarest. A French abridged edition is also in preparation under the supervision of Mr. Charles Sustrac. An English abridged edition is being prepared by the Science Museum Library.

INTERNATIONAL CHARACTER OF THE EDITORIAL WORK.—The preparation of the U.D.C. has been undertaken in various countries. It originated in the U.S.A., was carried on in France and Belgium, then in Great Britain and Holland, and now the main editorial work is being done in Germany. Criticism is received from representatives of nine countries. Thus the classification has more contact with reality than it would have had if the editorial work had been exclusively undertaken by the General Secretariat.

ORIENTAL CO-OPERATION.—A point to be considered in this respect is the relatively insufficient development of the classes dealing with oriental matters. Certainly, eastern philosophy, religion, and philology have their places in the classification, but it would be desirable to sub-divide more in detail the special sections dealing with topics which are important for the Far and Near East. In preparing the new edition we have been fully aware of this desirability, and a number of places has been left open intentionally in order to give full opportunity for future development.

THEORY OF CLASSIFICATION.—It is regrettable that outsiders are not aware of the theoretical work contributed by members of the Committee. Few people have been interested so far and therefore little has been published on the theory of the classification, but it is worth considering whether it would be possible to put the theory in a generally accessible form. Sooner or later it will be necessary to issue a manual; in the meantime, it would be useful if a series of reports were published.

L'UNION FRANÇAISE DES ORGANISMES DE DOCUMENTATION.

Report from Monsieur Jean Gerard: Besides those projects described in the Report of the ASLIB Proceedings for 1934, the U.F.O.D. has directed its attention to the following questions:

THE TERMINOLOGY OF DOCUMENTATION.—Before studying the problems arising from the organisation, U.F.O.D. considered as essential the establishing of a special vocabulary. A committee was therefore entrusted with the task of collecting and comparing definitions and of drawing up a scheme of terminology confined to a limited number of essential terms. The resulting vocabulary encouraged similar investigations. German documentation centres in translating it have added a certain number of new terms and the International Office of Chemistry has added certain definitions relating to photographic copies and the microphotography of documents.

THE ALPHABETICAL CLASSIFICATION OF RECORDS.—A Committee has been given the task of working out a scheme of principles which can be adapted to industrial matters, in the same way as libraries have had to submit to rules for the classification of their indexes and as historians for the editing of their tables. The U.F.O.D. has invited other organisations to co-operate in the work of this Committee, which groups together representatives of libraries, archives, the Association of Standardisation, the Technical Press, consumers and members of Government Departments.

EXHIBITION OF EQUIPMENT FOR DOCUMENTATION.—It is only when the idea of documentation has made itself felt by the public, that the various centres will see their efforts rewarded by a wider and more reasoned use of their services. This is the reason why the U.F.O.D. took part in the Exhibition of Equipment for Documentation held from March 28th to 2nd April, 1935. A tour of the stands was instructive, and this direct contact between the experts of documentation and the makers of apparatus has made possible an exchange of ideas that cannot fail to bear fruit.

THE EXHIBITION OF 1937.—The results of the Exhibition of Equipment for Documentation held in 1935 have encouraged U.F.O.D. to take part in the Exhibition of Arts and Technique in Modern Life which will take place in Paris in 1937.

In order to establish the plan of the presentation of documentation at this Exhibition, a questionnaire was addressed to all members of U.F.O.D. The replies received prove the interest which this project has roused amongst information officers. It was agreed that U.F.O.D. should take part in this Exhibition by organising a central stand whilst leaving to each of its members liberty to exhibit in the section corresponding to its activity. Its contribution will include an exhibition of graphs, illustrations, material of documentation, etc., visits to centres of documentation and the organisation of a daily conference on the subject of documentation.

THE NEDERLANDSCH INSTITUUT VOOR DOCUMENTATIE EN REGISTRATUUR.

Report by Mr. J. J. Roeloffs Valk, Director of the Institute. This institute co-operates with the "Nederlandsch Instituut voor Efficiency" (Dutch Management Institute).

PUBLICATIONS :

- (1) *Repertorium Technicum* (International bi-monthly bibliography of books and of articles appearing in periodicals on technical and allied subjects). Volumen IV. (This volume will be closed December, 1935; every year a new volume will appear.)
- (2) *Dutch Technical Bibliography*. (Monthly, in Dutch). Appearing in the *Short Communications of the Dutch Management Institute* (monthly bulletin). Copies on fishes available.
- (3) *Abbreviated Universal Decimal Classification in Dutch*. Appeared in March, 1935.
- (4) *Classificationis Decimalis; Supplementa et Correctiones*. Extensions and corrections of the Universal Decimal Classifications as fixed by the International Committee on Decimal Classification from the period 1929-1932.
- (5) *I.I.D. Communicationes*. Quarterly communications of the International Institute of Documentation. Free annexes: extensions and corrections of the Universal Decimal Classification as fixed by the International Committee on Decimal Classification after 1932.
- (6) *Union list of Scientific Periodicals*. The compilation of a list of periodicals available in public and in principal private libraries at the Hague is almost finished. This list will be published if the necessary funds are available.
- (7) *List of Dutch Documentary Sources*. The mimeographing of the first edition of this list of sources of bibliographic data is in preparation.
- (8) *Annual Report for the Year 1934* (in Dutch).
- (9) *A.B.C. Rules* (in Dutch). Rules for the alphabetical classification will be issued within a short time in co-operation with the Head Committee of Standardisation in the Netherlands.

OTHER ACTIVITIES :

- (1) *Standardisation of Periodicals*. The Head Committee for Standardisation in the Netherlands has published :
 - (i) Standards for abbreviations of titles of scientific periodicals;
 - (ii) Standards for foot-titles on the front page of periodicals.
- (2) *Information Service for the Supplying of Publications and Patents*. Supplying international bibliographical data on subjects wanted. Supplying copies (photographical) of publications and patents non-available in the Netherlands. Supplying information on the Universal Decimal Classification.
- (3) *Management Research Group on Documentation*. (In co-operation with the Dutch Management Institute.) A collaboration of about 30 important Dutch enterprises to improve documentation and registration in the enterprises of its members and to prepare publications in this field.

THE "DEUTSCHE FORSCHUNGSGEMEINSCHAFT."

Report from FRAULEIN DR. VON BUSSE.

Following a limitation in the scope of the "Notgemeinschaft der Deutschen Wissenschaft"—it now bears the name "Deutsche Forschungsgemeinschaft" (German Investigation Association)—the management of the Library section was

removed from the Notgemeinschaft's sphere of activity during the year 1934-35. Early in November, 1934, the "Bibliotheksausschuss," which hitherto had carried on this work within the Notgemeinschaft, moved into the rooms of the Prussian State Library and was established under the General Director of the State Library.

Its original task, the systematic procuring of foreign literature, was carried on as before, though to a limited extent. The stock of foreign periodicals from the libraries which had hitherto supplied them remained unchanged. During the first half-year specialised literature was allotted to those University and Technical Schools' Libraries which are in the habit of collecting such material.

In the yearly report the "Bibliotheksausschuss" brought out a printed "Verzeichnis der ausländischen Zeitschriften, die von der Notgemeinschaft der Deutschen Wissenschaft den Deutschen Bibliotheken geliefert werden" (Catalogue of foreign periodicals supplied to German libraries by the Notgemeinschaft der Deutschen Wissenschaft.). This catalogue was circulated not only to every library but also to many experts and was considered essentially as a practical text book for every scientist, as it enumerates many foreign periodicals and where, if they exist at all in Germany, they can be found. At the same time it greatly relieved the burden of inter-lending between libraries.

The system of exchange with foreign countries has increased considerably. Under the new régime this has been established as a new department under the name of "Deutsch-Ausländischer Buchtausch" (German and Foreign Book Exchange). In this case also it has been found possible to supply German libraries with many foreign periodicals by means of an exchange system which does not involve custom duties.

The exchange of duplicates and the inter-lending circle were combined with the duplicate exchange of the Library Authorities to form the "Reichstauschstelle im Reichs- und Preussischen Ministerium für Wissenschaft, Erziehung und Volksbildung" (Imperial Bureau of Science, Education and Popular Instruction). During last year the results were as follows:

Duplicate Exchange: 56,147 volumes and 35,029 separate works.

Inter-lending Circle: 3,798 volumes containing annual periodicals as well as 8,161 parts, with which 419 annual publications could be completed.

Foreign libraries of nearby countries took part in this. With those in countries farther afield a duplicate exchange on a "priced exchange" basis was carried on.

THE REICHSGEMEINSCHAFT DER TECHNISCH-WISSENSCHAFTLICHEN ARBEIT.

Report from Dr. Freitag: The "Vermittlungsstelle für den technisch-wissenschaftlichen Quellen-Nachweis" (the Clearing-House for Sources of Scientific and Technical Information) took upon itself after its establishment the task of publishing a review of all the German-speaking organisations working within the province of Technical and Scientific Information. This review gave not only the names and addresses of these organisations but also the scope of their information resources; that is, it showed which Bureau could supply books, bibliographies, or photocopies, and, lastly, the conditions upon which the different Bureaux were prepared to give information.

The compilation of information needed for the establishment of all these specialist bureaux was not easy. Repeated questions and enquiries were inserted in the daily papers, the technical press, and addressed to specialist organisations. It was only in 1931, that is, after an interval of two years, that a descriptive pamphlet on this particular activity could be published which was obtainable at any booksellers for 75 pfennigs a copy. It comprises about 150 specialist information bureaux in German-speaking territory grouped under different subject-headings. An alphabetical table of contents, showing the subjects dealt with in the different bureaux, simplifies the search for organisations which are arranged systematically.

Up to now, that is, until September 1st, 1935, about 750 enquiries have been dealt with by letter in the Clearing-House, to which must be added several hundred dealt with by telephone. This figure seems small, but it must be remembered that the Clearing-House does not aim at dealing with every enquiry itself. Its business is to refer the enquirer to the specialist bureau in question. It is primarily for this purpose that the review is intended. At this moment in Germany there is no large concern, no scientific engineer, no institute, no technical organisation that does not possess a copy of this review, and with its help all these are in a position to find out to which specialist bureau they should apply for certain enquiries. Questions on so-called "border-line" subjects only are dealt with by the Clearing-House.

As yet no enquiries have been returned to the enquirer with the information that for this or that particular branch of science there is no specialist bureau. The division of subjects has therefore proved satisfactory.

The practical procedure on receiving an enquiry is as follows: the Clearing-House sends out the original enquiry with several copies to a specialist bureau and notifies the enquirer that this has been done. If the specialist bureau in question is able to supply the necessary information, it communicates direct with the enquirer and not with the Clearing-House. It is only when the information cannot be obtained that the enquiry is returned to the Clearing-House, whose business it is then to find out whether another specialist bureau can supply the information required. It often happens that one enquiry concerns several branches of science so that it has to be sub-divided and allotted to different specialist bureaux before a complete answer can be given. In such cases, however, the specialist bureaux are notified in great detail so that unnecessary work may be avoided.

In earlier reports to ASLIB, it has been shown that other countries have taken part in this enquiry work in a proportion of about 25 per cent. The following countries, apart from Germany, have made enquiries which have been dealt with by the Clearing-House: Argentine, Austria, Brazil, Costa Rica, Czecho-Slovakia, England, France, Holland, Hungary, India, Ireland, Italy, Japan, Latvia, Luxembourg, Poland, Roumania, Russia, Sweden, Switzerland, Spain, United States of America, and the Union of South Africa.

Enquiries received can be divided up, on an average, as follows:

Private Individuals	..	..	..	..	..	50%
Firms	..	..	..	..	..	35%
Societies	..	..	..	..	..	8%
Civil Authorities	..	..	..	..	..	7%

Division into subjects is as follows:

General Engineering, including Mechanical	..	..	..	..	30%
Ferrous and Non-ferrous metals	..	..	..	..	11%
Electrical Engineering	..	..	..	..	11%
Chemistry	..	..	..	..	9%
Transport	..	..	..	..	8%
Miscellaneous	..	..	..	..	31%

SCIENCE SERVICE.

SCIENCE SERVICE: WASHINGTON, D.C. Following on the details of this organisation given by Sir Richard Gregory in his Presidential Address last year, the following new developments may be of interest to members.

In July, 1935, a DOCUMENTATION DIVISION OF SCIENCE SERVICE was established and Mr. Francis P. Garvan has made available a Chemical Foundation grant of \$15,000 for initial exploration and development of the following scheme or such modifications of it as may be decided upon:

- Design and construction of micro-photographical, enlargement, and reading apparatus for duplication purposes and other uses in bibliography.
- Inauguration in consultation with editors of scientific journals of a service for photo-publication of scientific papers and monographs that cannot now secure prompt or complete publication.
- Co-operation with libraries in making available by photographic methods the literature of the past.
- Investigation of the broad problem of scientific bibliography and mechanical and photographic apparatus applicable thereto.

These schemes result from the activity of Mr. Watson Davis, which has led to the financial support referred to and to important conferences in Washington in the month of July and thus to the prompt and active commencement of operations.

Details of proposals are being communicated by Mr. Watson Davis in a paper to the 13th Conference of the Institut International de Documentation at Copenhagen, September 9th-13th, 1935.

The problem of the perfection of photo-micrographical apparatus, etc., is being pursued with the help of Dr. R. H. Drarger of the U.S. Naval Medical School who has already done a good deal in this direction. Co-operation has also been secured with the U.S. Bureau of Standards and the Biblio-Film Service of the U.S. Department of Agriculture which has already issued over 150,000 copies of letter-press for some 90 different institutions and individuals.

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